ATHLETIC

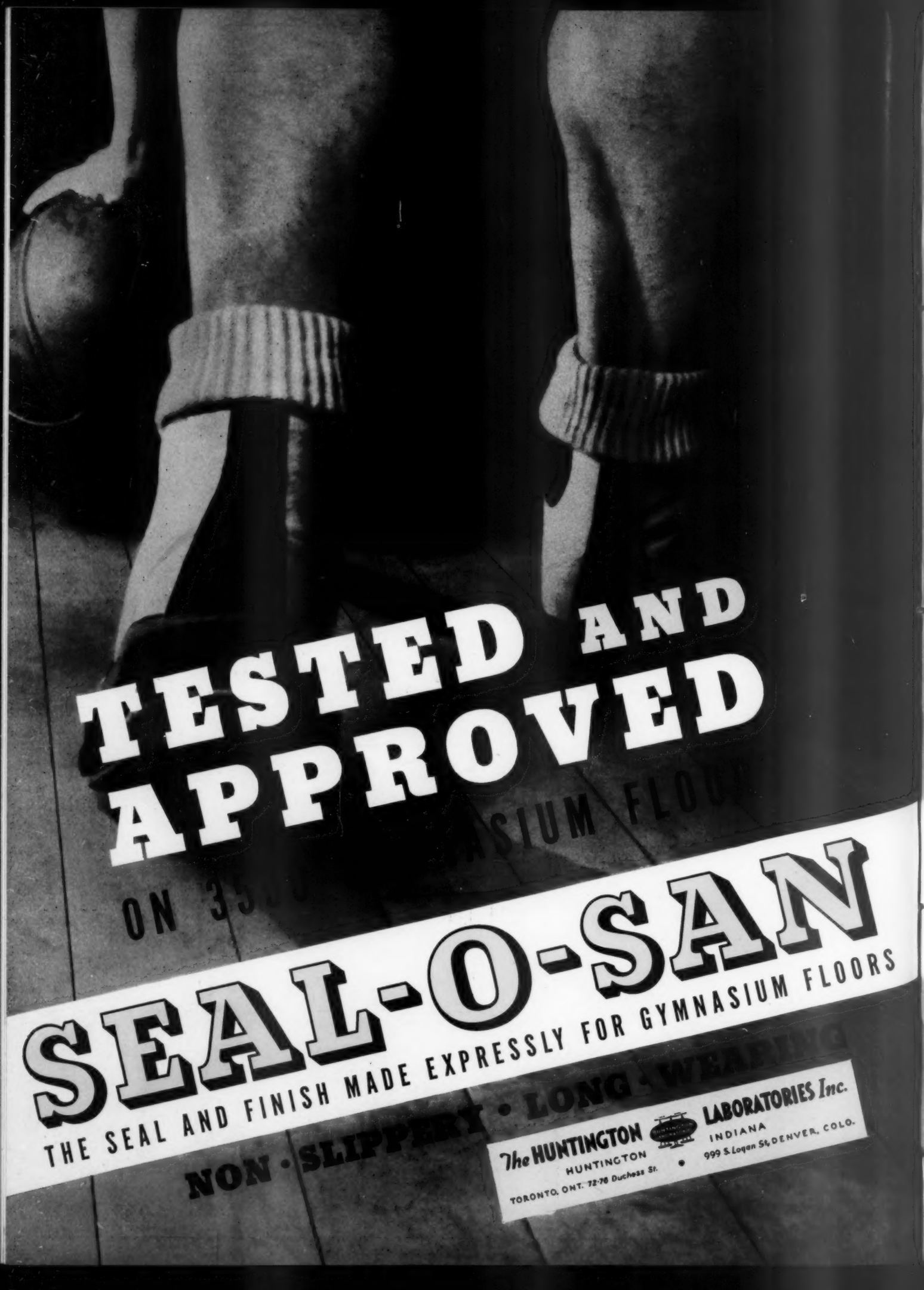
Vol. XV, No. 7 March, 1935

Coaching the High Jump
J. Flint Hanner

Individual Differences in the Training of Track Athletes
H. W. Hargiss

Development of the Pitcher
Paul J. Stawart

JOURNAL

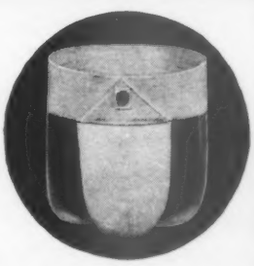

TESTED AND
APPROVED
SEAL-O-SAN
THE SEAL AND FINISH MADE EXPRESSLY FOR GYMNASIUM FLOORS
The HUNTINGTON LABORATORIES Inc.
HUNTINGTON INDIANA
TORONTO, ONT. 72-76 Duchess St. • 999 S. Logan St. DENVER, COLO.

2 out of 3 wear

BIKE

AT LEFT—You'll be picking the winner if you specify Bike Supporters for all your teams. Bike is worn by 2 out of every 3 athletes in school and college sports, according to a national survey recently made by the A. C. Nielsen Company.

SALES AGENTS:
A. S. Callaway, 275 Broadway, New York. Martin & Martin, 5 South Wabash Ave., Chicago. McDonald & Linforth, 420 Market St., San Francisco. John H. Graham & Co. (Southeastern States), 113 Chambers St., New York. H. B. Hughes, 839½ N. Beckley Ave., Dallas.



AT LEFT—Expert workmanship helps account for Bike's outstanding popularity. Bike seams do not pull out after dozens of trips to the laundry. Bike webbing stays smooth and uniform, too, without curling or chafing, because no starch or sizing is used.

BIKE-WEB MANUFACTURING COMPANY DANA E. MORRISON, PRESIDENT, 41 WEST 25TH STREET, CHICAGO, ILLINOIS

VOLUME XV

The ATHLETIC JOURNAL

NUMBER 7

CONTENTS

for March

PAGE

5 Coaching the High Jump.....J. Flint Hanner

9 Individual Differences in the Training of Track Athletes...
.....H. W. Hargiss

10 Get Down to Earth in Track.....Harold Barron

11 Development of the Pitcher.....Paul J. Stewart

14 The Basketball Team in the Tournament

14 Tournament Strategy .....H. Cecil Baker

14 Mental Attitude of Tournament Players.....Allen Dunaway

15 Does the 10-Second Rule Achieve Its Purpose?.....John C. Foti

16 Form in Speed Swimming.....Irwin H. Cohen

18 Outstanding Football Plays from Outstanding Coaches

21 Offensive and Defensive Play of Linemen

21 Offensive Line Play.....Bill Kern

26 Defensive Line Play.....Harvey Harman

30 An Apology for Intercollegiate Athletics.....E. W. McDiarmid

34 Further Development of the Paraffin Treatment for "Shin Splints" and Sprains.....J. Towner Smith

35 A Study of Basketball Scoring.....H. D. Edgren

38 The Physical Education Program in a Country Day School..
.....R. P. Hughes

41 The Mechanics of Sprinting.....Greyson Daughtrey

PUBLISHED MONTHLY except July and August by The Athletic Journal Publishing Company, 6858 Glenwood Avenue, Chicago, Illinois, Member Audit Bureau of Circulations. Request for change of address must reach us thirty days before the date of issue with which it is to take effect. Duplicate copies cannot be sent to replace those undelivered through failure to send advance notice.

SUBSCRIPTION PRICES: $1.50 per year; $2.00 for two years; $2.50 for three years; $3.00 for four years; Canada, $2.00 per year; foreign, $2.00 per year. Single copies, 25 cents. Copyright, 1935, The Athletic Journal Publishing Company. Entered as second-class matter, August 14, 1925, at the post office at Chicago, Illinois, under the Act of March 3, 1879.

VANDER-BILT

SPOT BILT

SPOT-BILT

ATHLETIC SHOES

"THE IDENTIFIED LINE"

That White Spot Is Patented

Patent No. 1,952,409

The Spot-Bilt Trademark Is Registered

Serial No. 357,163

Two of the most outstanding advantages of the White Spot are: first, the instant identification of Spot-Bilt shoes under any conditions. Second, the provision of a means by which players' numbers can be inserted in the Spot and the individual shoes thus identified. This feature is of particular interest to equipment men.

Spot-Bilt users are rapidly realizing that an identified shoe must be backed by the integrity of the manufacturing organization. The positive identification of shoes throws the burden of responsibility squarely on the shoulders of the manufacturer. Thus the selection of materials and the care in workmanship must be more carefully supervised than in an unidentified product. This has two major effects: first, within the manufacturing organization it gives pride in workmanship. Second, it gives confidence to the user in that he knows that the manufacturer cannot disregard his responsibility.

SPOT-BILT ATHLETIC SHOES

Manufactured By

WITCHELL-SHEILL CO.

1635 Augusta Blvd. **Chicago, Illinois**

SPRING PRACTICE USHERS IN

SOME NEW IDEAS ON SPEED!

PARE off weight, shear away excess bulk, bolster structural strength—and any engine (even the *human* one!) yields more power and speed. Without sacrifice of safety.

Right now, in time for Spring Practice, Reach, Wright & Ditson offers a complete new line of football equipment. *Everything*—helmets, shoulder guards, football pants—has been made *lighter* for increased speed. And despite its lightness, it's *safe. Made* safe by incorporating all the latest and surest protective devices.

Have your Reach, Wright & Ditson Dealer show you this new line before you outfit your boys for 1935. And see for yourself how *speed* and *safety* have been brought together in this new football garb.

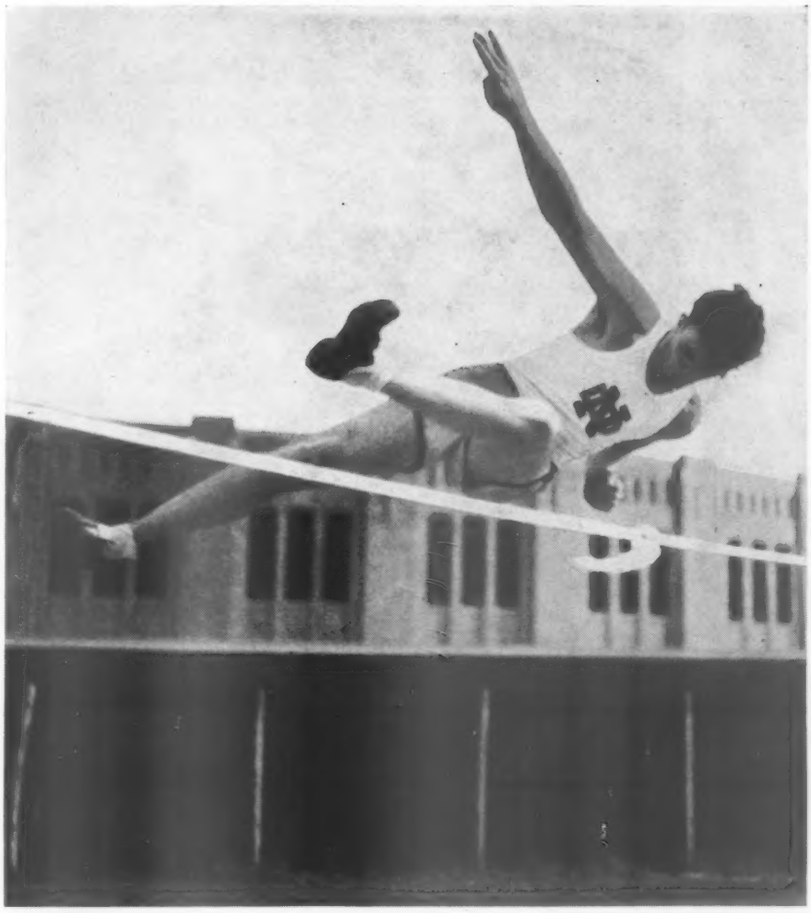
2-Piece Football!

See, also, the *Reach AIR-FLITE Official 2-Piece Ball.* No lumpy seams at ends, so it bounces accurately when it lands on its nose—a decided advantage on drop and place kicks. No underseam—which permits all kicking on a full panel. The lacing is set in the center of a panel—so the *passer* gets a better grip . . . and better control.

If *price* is an important consideration, remember this: There's Reach equipment to match every budget. And dollar for dollar money can buy no finer. A. J. Reach, Wright & Ditson, Tulip and Eyre Streets, Philadelphia, Pa.

A. J. REACH, WRIGHT & DITSON

1935 FOOTBALL EQUIPMENT



Coaching the High Jump

By J. Flint Hanner
Track Coach, Fresno State College

THE development of the high jump has been a very interesting evolution of form which has taken place during the last forty years. The first jumpers used the old style scissors and with very little training reached about 6 feet, but only a few men ever surpassed that height. Occasionally an athlete made 6 feet 3 inches, but this was a rather rare performance. No doubt, if the bar had rested on a flat surface as it does now, the records would have been poorer, as the bar would have been very easily displaced, and the usual luck of having the bar bounce up and down and against the standards would not have occurred.

As in all other events, the record for the high jump has been broken several times, chiefly because of the scientific study by the competitor and the coach. More universal participation in track by a larger number of athletes has stimulated keener competition, and, as a result, record breaking performances have been turned in yearly. Because of these two reasons, records have been established which a few years ago would have made good events for a "believe it or not" column for some newspaper syndicate.

The Western Roll

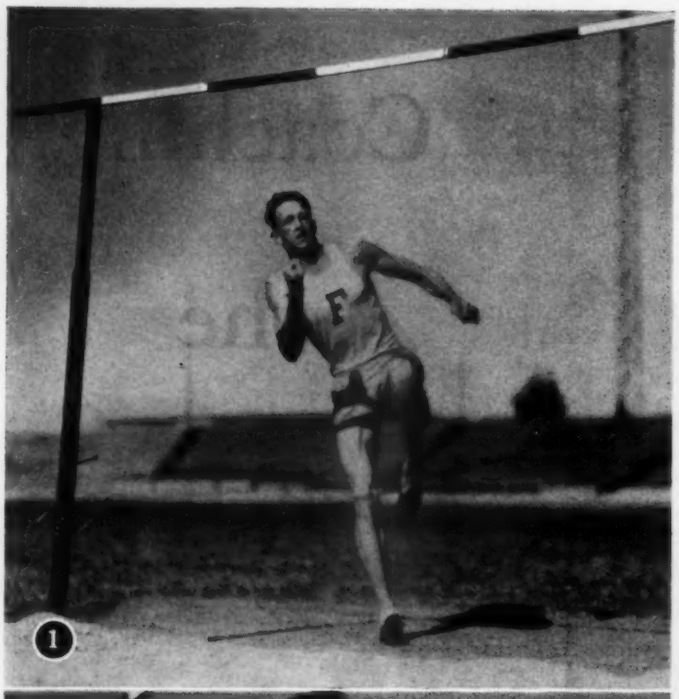
THE limitations of the scissors style of jumping really were the incentive that developed the Western style of jumping. Many of the first jumpers using the Western style ran into a great deal of trouble on account of the tendency to dive, but all the later jumpers of note have been so well trained that the question of diving rarely comes up any more in sectional or national meets. Most jumpers have found that the practice of allowing the head to precede a foot has cut down their performances. In other words, they have lost their drive, lift and co-ordination when the head has been out of position.

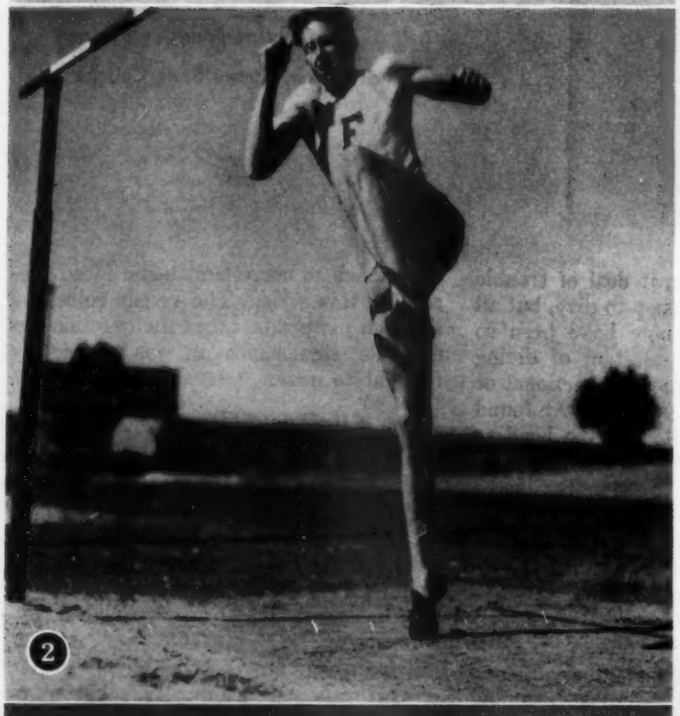
The first great exponents of this Western style on the Pacific Coast were George Horine of Stanford University and Edward Beeson of the University of California. These two men experienced some difficulty in regard to the rule on diving. Many rules were made concerning this style of jumping, and at every meet various judges would try to pass on the question of whether the jump was legal or not. This was a very difficult question as it involved a decision as to whether a foot preceded the head or whether the head was below the buttocks. It really was too great a question for an ordinary field judge to decide. Many good jumpers have been ruled out of meets, or their performances have been ruined by the constant fear of having some judge disqualify them. Most of the debatable points concerning the legality of the Western roll have been corrected by better methods of coaching and better training on the part of the athlete. The slow-motion picture camera also has done much to correct mistaken ideas concerning this style. The recent ruling on the high jump shows that the question has not the significance it was previously thought to have.

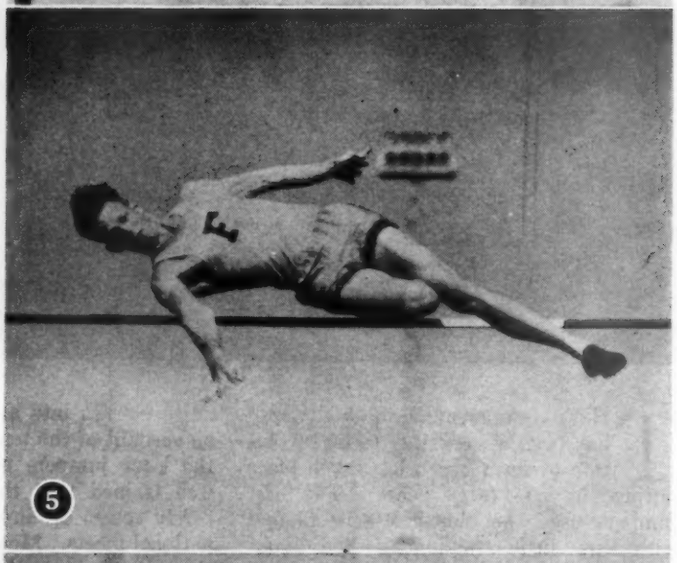
All-Around Development

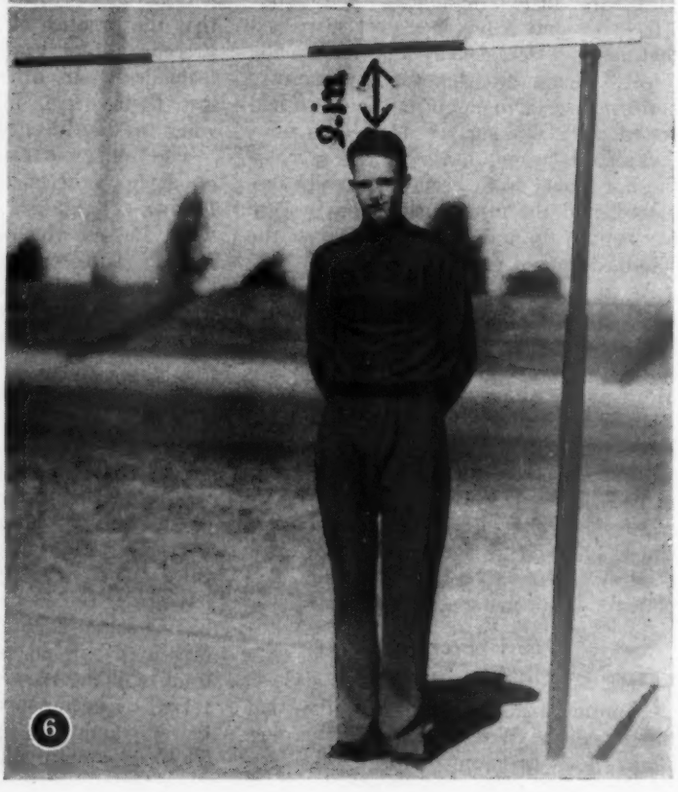
THE high jumpers of a few decades ago were great specialists, as they limited their training solely to jumping and took very little work on the track and in other field events. This style of training limited their maximum possibilities from a physical condition angle as well as psychologically. The latter is very important, as a man may become mentally tired of performing in a specialty, while, if he has developed himself in other events that he can turn to, he will immediately return to his specialty with a better attitude so that he again has the mental alertness and physical co-ordination so necessary for a good high jumper.

The more recent high jumpers have been great all-around athletes. Alma Richards of Utah was an excellent performer in the shot, discus, broad jump, hammer, hurdles and sprints. Harold Osborne of Illinois, a former record holder at 6 feet 8¼ inches (1924), was a great decathalon champion. The great jumpers of the present day are Willis Ward of the University of Michigan, George Spitz of New York University, Cornelius Johnson of Compton Junior College and Walter








2 in

Illustrations 1 through 5 show Walter Marty of Fresno State College in the Western style high jump. Marty set a world's record of 6 feet 9⅛ inches in a dual meet with Stanford University, April 28, 1934. He leads the high jumpers on the 1934 Collegiate Honor Roll. A very interesting fact concerning Marty is that he has jumped over 6 feet 8 inches in nine different meets, which is an outstanding record.

Illustration 1 shows that Marty's body has been dropped in order to secure a crouch or gather. The body may be leaned a little backward to get a back lift in the upward drive. This will minimize the tendency to dive. The legs must be in excellent condition to acquire as much crouch as possible.

Illustration 2 demonstrates the terrific drive from the right leg and the lifting of the left. The arms are lifted and the back is in a good position for the lift and the turn for the lay-out. Notice that the right toe is extended for all the spring possible.

Illustrations 3 and 4 show the further lifting of the arms and the beginning of the roll, produced by a kick from the back leg which will add inches to the leap.

Illustration 5 demonstrates the position over the bar, with the left leg extended and high enough to allow the right, or take-off, leg to be tucked under it. Care should be taken to see that this position is not assumed before the body reaches the bar. Many jumpers have the head and shoulders too high over the bar, thus losing a couple of inches of height. They should drive harder on the take-off leg and use a backward lean in order to get a horizontal lay-out over the bar. The roll is completed from this position and the jumper comes to a landing on the right leg and arm, and then the left arm, so that the landing is done easily.

Illustration 6 shows Marty standing under a bar which he has just cleared. It is 9 inches above his head.

Illustrations 7 and 8, showing George Spitz, give an excellent idea of the action over the bar in the Eastern style jump. Spitz, a New York University jumper, leaped 6 feet 8 inches in the New York Athletic Club Games in 1934. He ranks second on the 1934 Collegiate Honor Roll.

It will be noticed in Illustration 7 that excellent timing is necessary to throw the right arm up and the right leg down and at the same time prevent the arm or chest from displacing the bar. This style allows the jumper to get a wonderful lift from the swing-up leg, but it requires more technique over the bar than does the Western style. The jumper must have excellent co-ordination to get the shift of his arm and leg in such a way as to avoid the cross-bar. George Spitz and Willis Ward obtain greater height than do most Western style jumpers, but they seem to have a tendency to brush the bar off with their chest when descending to the pit.

Illustration 9 shows Douglas Barham of the University of Oklahoma. He could, perhaps, secure greater height if he kicked his back leg forward a little faster than he seems to have done at the time this picture was taken. The action of the back leg appears in this photograph to be delayed. Barham ranks third on the 1934 Collegiate Honor Roll. His best jump was 6 feet 6¼ inches, made in a dual meet with Oklahoma A. & M.

The illustration on page 5 shows Vincent Murphy of the University of Notre Dame, an Eastern style jumper. His rank on the 1934 Collegiate Honor Roll is fifth, just below Willis Ward of the University of Michigan. Murphy's best jump of the year was made in a dual meet with Ohio State University, 6 feet 5¾ inches. Ward's best jump was 6 feet 5⅞ inches, made in the Butler Relays. Some coaches might criticise Murphy's form in this particular picture in that his right arm seems too stiff and his left arm cut in too close to his body. Certain coaches teach their jumpers to raise both arms about head high at this point in the jump. Murphy's leg action appears to be excellent; he is using a decided cut.

7

8

9

Marty of Fresno State College. These men are excellent performers in many other events. Willis Ward is an all-around track man. George Spitz has broad jumped 23 feet 10 inches, run the 100-yard dash in 10 seconds and high jumped 6 feet 8½ inches. Cornelius Johnson has better than even time in the sprints and is an excellent broad jumper. Walter Marty would make any coach happy as a sprinter, quarter-miler, half-miler, miler and broad jumper, besides being average in other events.

The ability of these athletes in other events apparently indicates that it takes a real, all-around man to jump 6 feet 8 inches, or that our jumpers should take an interest in other events in order to bring about greater physical development and co-ordination that will improve their performances. Both physical development and co-ordination are very important and should not be overlooked by the coach or athlete, if the maximum height is desired.

Most coaches consider the height of a jumper as a great advantage. This qualification has been very greatly exaggerated for many years. I believe that the maximum distance a man can jump over his head is approximately 10 inches. Osborne of the University of Illinois, Marty of Fresno State College, Yada and Asakama of Japan have records of approximately 9 inches over their heads. There are a great many more men about six feet tall than six feet four inches; so one might naturally expect more jumpers from the first group. Then again, the shorter man is more apt to have the necessary co-ordination and spring so essential to a high jumper.

Athletes using the Western style of jumping have established more records than all others, and, naturally, I am somewhat prejudiced as Walter Marty is an exponent of the Western style. This method permits the athlete to secure better co-ordination, more drive and more lift than any other.

Walter Marty's Style

DURING this discussion I shall describe the style used by the men I coach. Almost every jumper that Fresno State has had approaches the bar from the right, although the left approach is just as good if the man is a left-footed jumper.

The approach to the bar is made from an angle of about 30 degrees. This varies from the regular standard of 45 degrees because we have experimented at Fresno State and found that, in jumping at greater heights, the athlete requires a fraction of a second longer to bring up the right or jumping leg and fold it under the left when going over the bar. The illustrations of Marty show that the take-off leg must be lifted very rapidly or the bar will be displaced. Marty has experienced many handicaps from his running at the 30-degree angle, as many pits do not have runways approaching from that point. Special runways have been constructed to allow him to use his normal style.

The approach at the Stanford University field last year would not allow a jump from the deep right, as the runway was elevated above the field; so Coach R. L. Templeton extended the runway over to the 30-degree angle in order that Marty could make his usual approach. Later, during the Stanford-Fresno State dual meet, Marty established a new world's record of 6 feet 9⅛ inches and, after waiting a half hour for officials to measure the distance, he just missed 6 feet 10¼ inches by a whisker.

The run is usually about 38 feet or nine steps. The first steps are relaxed and somewhat bounding, while the last two are driving steps to give drive, spring, and gather for the final effort. On steps previous to the take-off, the body is dropped or settled to produce a crouch.

FOR the past ten years, J. Flint Hanner has been coach of track at Fresno State College. His track teams have won the championship of the Far Western Conference for four consecutive years. He started his coaching career with one year at Petaluma High School and two years at Chico High School after graduating from Stanford University, where he was track captain in 1922. He was a member of the 1920 Olympic team and participated in the javelin event. The article presented here should be of particular value to coaches with promising high jumpers, as Mr. Hanner has had no small part in developing Walter Marty, present record holder in the high jump.

The take-off is approximately 36 inches from the bar and moves slightly backwards as the height is increased. Many jumpers make a mistake by taking off too far back, thus producing a broad jump for height. The drive must be up, and not out, in order to secure the greatest possible height. The left leg is kicked upward and somewhat sidewise as the body is turned toward the right. The arms are lifted slightly upward, the right a little outward in order to produce the lay-out. The left leg is almost straight over the bar and the right is tucked under the left to prevent displacing the bar. This action will produce the necessary lay-out in order to gain the greatest height. Care should be taken by the jumper that he does not turn too rapidly, as the hips may knock off the bar. After the jumper crosses the bar, the roll is continued so that the landing is on the right leg and arm, then over on the left, so that no shock or fatigue is produced by the continued jarring from a poor landing. Many jumpers punish themselves severely by poor landings, which means that when the bar is at 6 feet 2 inches or more they are fatigued to such a degree that their maximum efficiency has been impaired.

The Eastern Style

MANY coaches like the Eastern high jump style better than the Western form. There have been many discussions over the advantages of various styles and variations. The Eastern style provides the jumper with a better opportunity for the swing up of his leg, which gives him a lot of drive and lift. The landing on the feet in the Eastern style is an advantage, as the jar may not be so great as in the Western. The main disadvantage is that a man must do quite an acrobatic stunt while over the bar to get his complete turn.

The Japanese jumpers, Yada and Asakama, use the Eastern style and have developed it to an excellent degree. Yada is about five feet eleven inches tall and has jumped 6 feet 6 inches. Asakama is about five feet ten inches tall and has jumped 6 feet 6¾ inches. From these records, it may be readily seen that the Japanese are mastering the form of the American athletes. Toribio of the Philippines is another good exponent of the Eastern style.

The Americans have always excelled in the high jump, as all but one Olympic champion has been an American trained athlete. But the Japanese are showing great improvement and should be a threat in the 1936 Olympics.

Training for the High Jump

PROPER training for the high jump is very important, while fall training is necessary if the athlete expects to achieve any great results. Running is essential to attain condition, as all the stamina and vitality possible are required. Some 330-yard runs on Wednesday or an occasional 440 is very good. Light sprinting on Monday is valuable for conditioning. Contrary to the opinion of many coaches, I favor some broad jumping to develop drive and gather. Of course, the hazard of a sprained ankle is always present, but I believe it is worth the risk if not overdone.

Hurdling is good exercise to develop timing and rhythm for the high jump. The weight events are good to develop co-ordination and drive. Rope skipping is very good, as it develops the calves of the legs and also gives timing to the ankles and toes.

Too many athletes jump too much. After a man is in shape, he should jump hard on Tuesday and then a little on Thursday, but not enough to take the snap out of his legs for a Saturday meet. A man should never be over-trained, as he is very likely to become stale. An under-trained man is much better, as he has fight, drive, snap and confidence.

Marty has used a seven-spike shoe with

spikes about three-eighths of an inch long. The odd spike is in the front part of the shoe under the big toe. The spikes are long enough to grip and yet not so long that they will cause the clay to "cup out," leaving a soft place for the next take-off.

There has been a great deal of discussion concerning a jumper's being able to jump seven feet. As previously mentioned in this article, a jump of seven feet will require a taller man than the present champions and one with all the co-ordination, spring and drive necessary to jump. The chances are very remote that man will leap seven feet in the very near future unless some unusual jumper is developed with a new variation of the present style to secure more lift.

Individual Differences in the Training of Track Athletes

By H. W. Hargiss
University of Kansas

TRACK, more than any other sport, provides an opportunity for the coach and trainer to study the individual traits and characteristics of those participating. Through scientific study and experiment, it is possible to determine the event, as well as the kind and amount of work, best suited to the development of the individual athlete.

Originally our knowledge of track athletes came from the ideas practiced by the old time trainers of race horses and professional boxers. The influence still remains to some extent in that a stereotyped procedure is often followed in developing and conditioning athletes in the several running events.

Individual Training Methods

YOUNG and inexperienced coaches are often misled by what they read in books on how to coach or by the training program of a great athlete. It is impossible to outline a training program, say for the mile run, and expect that schedule to meet the need of everyone participating in that event.

Scores of letters have been received from young coaches and candidates for the mile run wanting an outline of the training schedule of Glenn Cunningham. The program which he follows would without question be wrong for many runners. This is well proved by the fact that the several great middle distance runners of today—Cunningham, Bonthron, Beccali, Lovelock, Ny and Venzke—each has an entirely different program of training and practice.

The modern trainers of race horses are following the idea of a varied training schedule, dependent on the temperament and physical characteristics of the horse. In the case of the race horse, we have an animal bred and crossbred to develop speed and the competitive ability of generations of thoroughbreds. In modern civilization, no attempts have been made along this line in the human species; so we naturally expect a greater variance in mental attitude, physical equipment and nervous reaction in the candidates for our athletic teams. Consequently, greater allowance must be made in the kind and amount of work which will be best for the development of each individual.

A VETERAN with many years of experience, H. W. Hargiss has coached at one time or another every major and most minor collegiate sports. He began his career in 1909 as coach of football, basketball and track at Marion, Kansas, High School. In 1910, he went to the College of Emporia as athletic director, where he was particularly successful in football and basketball. After a year as assistant coach at the University of Kansas, Hargiss made an outstanding record at the Kansas State Teachers College of Emporia. Following two years at Oregon State College, he returned to the State Teachers College at Emporia, where, between 1921 and 1927, his teams won four football championships and five track championships. From 1928 to 1931, he was football coach at the University of Kansas, his team winning the Big Six Conference championship in 1930. He has acted as track coach at the University of Kansas since 1932. Among the outstanding athletes who have come under the influence of Hargiss are Harry Cole, discus thrower; Earl McCowan, pole vaulter; Elijah Williams, sprinter; John Kuck, shot putter and javelin thrower; James Bausch, football player and Olympic decathlon champion; and Glenn Cunningham, world's record holder in the mile.

The famous trainer Mike Murphy once said that "Champions, like poets, are born, not made." Probably what the old coach had in mind was only that there must be inherent certain mental and physical qualities which are essential to excellent performance. It is as natural for some boys to outstep their friends in a running race as it is for others to excel in a mental contest. Many times we find an athlete with all the inborn or natural qualities, yet he never becomes a champion. The majority of our modern champions, whether in mental or physical prowess, have become such because of perseverance, determination, hard work and a willingness to pay the price, as well as because of the fact that they have inherited certain qualities. Every boy can learn to run and may often improve to a point well beyond mediocrity through determination and proper training. This is valuable in many respects as it adds to his health, courage, poise and self-reliance.

Basic Training

THE allowance for individual variety in training work should come after the ground or basic work is completed. There are certain phases of training and conditioning which are fundamental and should be carried out by all candidates for the running events. Cross-country or road running is the best and surest method of conditioning the heart, lungs, nervous system and muscles. It is essential for those athletes running distances from the 440 up and is beneficial even for sprinters, hurdlers and jumpers. Two or three runs each week in the fall over distances of from two to five miles, in heavy shoes without spikes, make a splendid pre-season program of work.

Another indispensable part of training throughout the season is calisthenics. Setting up exercises, rope skipping, Indian clubs, chest weights, bag punching and bar work are very valuable, as they develop coordination and rhythm.

Determining the Best Events

WHEN the pre-season training period is over, it is well to experiment in actual contests to determine the events for which the several candidates are best suited. A great many athletes are participating in certain events because of fancy and have never been advised in regard to their natural qualifications. It is found that many times athletes while in college become stars in some events other than the ones in which they participated in high school. Careful observation and selection of proper events for boys in their early scholastic training are of utmost importance.

A few years ago, a boy came to college who was a fair high school sprinter and broad jumper. In college he became a conference champion in the mile run. At the present time, on the freshman track squad at the University of Kansas is a boy who was state champion in the high jump and quarter mile. He appears to

have all the qualities for an excellent high hurdler. Other examples of this kind might be mentioned.

The Training Program

WHEN men have been selected for their events, careful observation should be made of each one as to how they react to workouts. It may be found necessary to vary the work for each individual. Two hard workouts each week will with many runners get better results than hard work every day. The old saying, "You can't pull water from a well with a barrel and expect the supply to last," applies to most runners in that the coach cannot run them hard all week and expect a creditable performance on Saturday.

It often happens that one runner needs much speed work and another in the same event needs endurance work.

After runners are in fair condition, overdistance work is not necessary. Speed and knowledge of pace are important, and rhythm and ease of running are necessary. The nearer the athlete keeps to a uniform pace throughout the race, the better will be the performance. I am convinced that recuperation comes from rhythm and not from running some part of the race, particularly the third quarter, more slowly in order to rest up for the finish. In the race in which Glenn Cunningham established a new world's record for the mile, the quarters were fairly even, approximately 62, 63, 62 and 59.7 seconds. Many prominent coaches have taken exception to this theory and suggested that, if Cunningham would run his first half in 1:58 or 2:00, the 4:04 mile would be easily within his grasp. They may be right, but we never have felt like trying it. When Ben Eastman ran his 1:48.9 half mile, the first 440 was run in less than 52 seconds. Maybe, if Ben had run the first quarter in 53.5 seconds, he could have finished with a 54-second last 440 instead of nearly a 57-second quarter. As I viewed the race, it was evident to me that Ben lost much time on the last 100 yards.

Cunningham and Eastman are splendid examples of champions in which individual traits and characteristics call for a training program and method of running en-

(Continued on page 36)

H. W. Hargiss

Get Down to Earth in Track

By Harold Barron

AN old Penn State hurdler, Hal Barron has been track coach and trainer at Georgia Tech and the University of Arizona. At the present time, he is in the Probation Department at Los Angeles, California.

TRACK athletes and their coaches have been working for years with the stride. And one of the important phases of the stride—the timing—has been especially difficult to grasp and to teach.

Novice track men have often attained some semblance of a stride with the help of the coach, but usually it has been, as far as the timing is concerned, more or less of a hit or miss affair. Sometimes the new man has the stride fairly well learned, or he may possess it for a few days, and then lose it, especially under stress in a race.

On the other hand, the champion track man, from years of repetition, has so trained his muscles and his brain that he can forget about the timing of his stride. The new man, even with slow motion pictures of the champion, would find it difficult to copy the timing.

It is this phase of running that seems to need more attention and research if we are to bring track and field athletics up to the level reached by great numbers of football and basketball athletes.

Accidentally, a new idea about timing was flashed to this writer one day as he saw a high school athlete, once a floundering type of hurdler, step along in what appeared to be the striding and timing of an experienced hurdler. This hurdler had been running for only a few days over the white-washed spike marks of an experienced runner.

The youngster was not only reaching each hurdle at the proper spot but he was getting there in the comparatively effortless manner of the experienced runner. Later, the same idea was tried with students in a theory class in track coaching, none of whom had had previous experience in hurdling. Most of the students caught the correct stride with the timing.

This idea as applied to all running events, when broached to Charley Paddock, received a warm welcome, while it was received with skepticism by Boyd Comstock, well-known coach, editor and experimenter in track and field athletics. The final word as to the worth or the uselessness of the idea will be passed only when track coaches over the country, with champions in different events, really put it to a test and report the results at their meetings.

It would seem especially advisable for high school coaches to try to get measurements of the stride distances of one or two champion runners from a nearby university. Having these marks, the high school coach could experiment with his brand new freshman track men. The results might possibly be pleasantly amazing because of the usual exasperating experiences in teaching stride-timing to novices.

The high school coach might try to get the help of the college coach in having a champion run over a freshly brushed track or runway, and in having the distances between the spike marks measured and recorded. Then the high school coach could transfer these measurements to the school field and he would let his novices do their training over those marks.

Since the experiment has passed exhaustive tests in widely separated parts of the country, and with novices, there is reason to look for its successful use in all sections.

The college coach with a champion could use the idea himself and pass it on to his freshman coaches. He might record the spike marks of his best athletes at their top performances late in the season for use the next season to save time in giving them the stride-timing after a lay-off.

The football coach is not the least bit reluctant about putting important information about football on paper for use from one season to another, and the track coach might very wisely keep a "library" of what would seem to be important facts about the men who have demonstrated that they hold the secret of winning track and field events. And since the cinder track, the runway and the spike marks are really inexpensive and give very tangible evidence of the way the champion performs, the coach should find it worth while to go to the trouble that any real scientist would take if he were keeping evidence of championship performance.

Development of the Pitcher

By Paul J. Stewart
Baseball Coach, Northwestern University

AS third baseman and shortstop, Paul J. Stewart played on the Western Conference championship baseball teams of the University of Illinois in 1921 and 1922. He was captain of his team in 1923. After a trial with the St. Louis Cardinals, he was farmed to the Fort Smith, Arkansas, team of the Western Association. Later, he played with Bloomington and Springfield in the Three Eye League. During the school year, from 1924 through 1928, he assisted his old coach, Carl Lundgren, at the University of Illinois. In 1928, he became head baseball coach at Northwestern University. In his six years at Northwestern, his team has placed in the first division of Western Conference standing four times. He has had unusual success in developing young pitchers, and in the past four years has sent three of them to the major leagues for trial. Mr. Stewart is a World War veteran and spent two years overseas with the Rainbow Division before entering the University of Illinois.

THE success or failure of the baseball season, especially of high school and college teams, depends to a great extent upon the ability of the pitchers. Therefore you, as a coach, should spend a major part of your time on the development of these men.

Study them carefully in their early workouts. Do not be in a hurry to change their deliveries radically, because it is impossible to make every pitcher pitch exactly like every other pitcher.

Rather than try to pour them all into the same mold, pick out the good characteristics of each man's delivery; then, by modifying his faults, try to improve his effectiveness. Too radical a change in delivery may rob a pitcher of his effectiveness through an entire high school or college season.

Control

CONTROL is the greatest asset your pitchers can have, and it requires the hardest kind of work to acquire. Impress on them that in every workout they must concentrate on throwing the ball where they want it to go.

Fast Ball

NEXT to control, a pitcher's fast ball is his greatest asset. But if he lacks control, it can be his worst enemy, because it is the easiest delivery to hit when poorly pitched.

The grip on the ball is important. Illustration 1 shows one excellent way to hold the sphere when pitching the fast ball. Notice that the tips of the fingers are gripping the stitches on one seam; the thumb is gripping the opposite seam almost directly below the first finger. In this case, the pitcher holds his thumb straight. Some pitchers prefer to turn the thumb so that the ball rests on the side of the thumb rather than on the ball of the thumb. Other pitchers hold the ball with the fingers across both seams where the seams are closest together, the tips of the fingers on one seam, the other seam under the fingers. Any grip that insures a firm hold and provides a maximum spin when the ball leaves the fingers will do. Notice also in the illustration that, although the ball is held firmly, there is considerable space left between the ball and the web of the hand. If the ball is held too deeply, it retards the spin and speed of the pitch.

In delivering the ball, the pitcher should allow it to leave the tips of the fingers last.

Curve Ball

THE grip for the curve ball should be identical with that for the fast ball in relation to the position of the fingers and thumb on the stitches. The ball should be a trifle deeper in the hand to increase the spin, and the pressure of the grip should be put on by the thumb and middle finger. The first finger should, of course, be in contact with the ball but loosely, acting as a drag to increase the spin as the ball is released. In delivering the curve ball, the wrist and hand are turned so that the back of the hand is almost toward the batter. The ball leaves over the side of the first finger, instead of off the tips of the fingers as it does in the fast ball.

Pitching Delivery

A LONG or short wind-up is a matter of personal choice. Illustration 2 is an excellent picture showing the start of the delivery. Notice that the ball has been dropped well back and toward the ground. The wrist is turned back slightly so that the ball, rather than the back of the hand, is toward the ground. This gives the pitcher the maximum freedom in the wrist action when delivering the pitch. Notice how well the ball is screened from the batter's view by the pitcher's body and right leg.

The right knee is slightly bent, the body pivoted at the hips and the left foot lifted high, preparatory to taking the forward step. The position of the left foot is not arbitrary; some pitchers prefer lifting the knee more and bringing it around past or nearly past the right leg in starting their delivery. That is a matter of individual choice. The main object is to attain the maximum pivot and maintain the most nearly perfect balance.

Illustrations 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 show various stages and degrees in the follow-through. The men shown in Illustrations 3, 4, 5 and 6 finish the pitch in a fairly erect position. Those in Illustrations 7 and 8 bend a trifle more at the waist to attain their effectiveness, and those in Illustrations 9 and 10 go to the extreme, reaching almost to the ground on their follow-through.

These pitchers all have certain things in common. They all pivot with their shoulders so that at the end of the pitch their pitching shoulder is pointing directly at or a little beyond the hitter. This permits them to attain the greatest whip and follow-through of the body and arm, with the least strain on the arm. These pitchers also bring the ball well across to the front of the body before releasing the ball, securing the maximum arm swing and partially screening the ball from the hitter with their bodies by so doing.

Notice that in Illustrations 8, 9 and 10, where the delivery has been completed, the back foot has swung around naturally and has come to rest at a point almost even with the other foot. This leaves the pitcher facing the hitter and in good position to field batted or bunted balls on either side of the pitcher's mound.

Illustrations 2, 3, 4, 6, 8 and 9 give a good idea of the complete delivery. Illustration 2 shows the start; in 3 the ball has left the hand in front of the body and the right foot is leaving the ground. In 4 the right leg and foot are swinging up and through. In 6 they have reached the height of the swing. In 8 the foot is settling on the ground, and in 9 the pitcher is ready to field his position.

Illustration 11 shows a common fault in young pitchers. The back leg is brought forward too close to the front leg, making a rather cramped and strained position This detracts from the "stuff" the pitcher can get on the ball and puts added strain on the arm. Incidentally, when this particular pitcher is really bearing down, he swings his leg up and around even higher than the pitcher in Illustration 7.

Illustration 12 shows a pitcher who in this particular picture is not using the back leg at all in the follow-through. This is also a common fault and lessens the pitcher's effectiveness considerably.

Another common fault in young pitchers, not illustrated, is the taking of an additional step on the follow-through. This may add a little to their "stuff" but it leaves them in bad position to field any batted or bunted balls on their bare hand side. This habit should be overcome if possible without completely robbing the pitcher of his effectiveness.

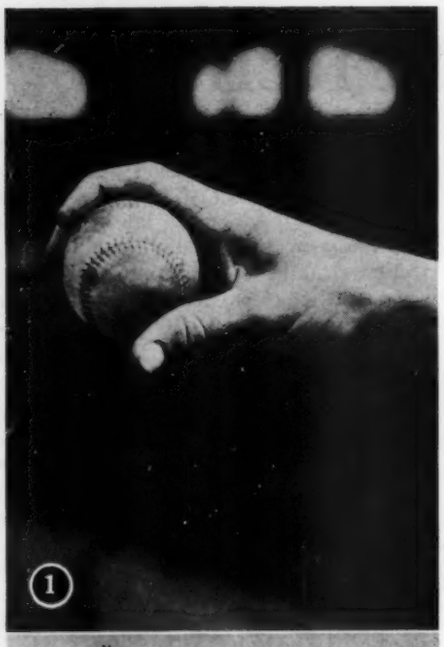


Illustration 1—The grip for the fast ball, demonstrated by George Earnshaw of the Chicago White Sox. Note the position of fingers and thumb. Some pitchers prefer to have the ball rest on the side of the thumb. Others hold the ball with the fingers across the seams at a point where the seams are closest together.

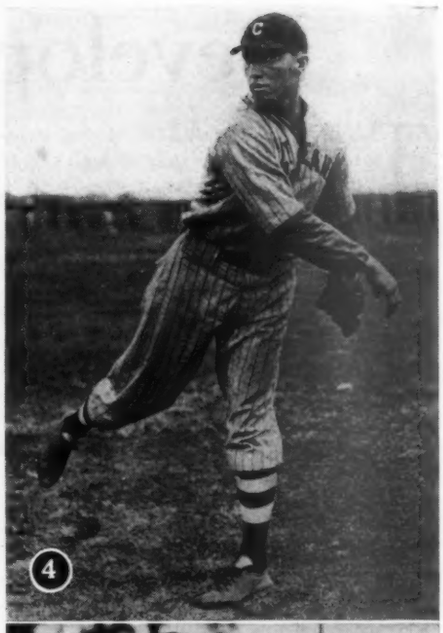
Illustration 2—The start of the delivery; Luke Hamlin, Detroit Tigers. Notice that the ball has been dropped well back and toward the ground and that the wrist is turned back slightly so that the ball, rather than the back of the hand, is toward the ground. This gives the pitcher the maximum freedom of wrist action. Notice, also, how well the ball is screened from the batter's view. Some pitchers prefer to bend the left knee more than does Hamlin in this picture and bring it around past, or nearly past, the right leg in starting the delivery.

Illustration 3—Releasing the ball; George Earnshaw, Chicago White Sox. Earnshaw finishes the pitch in a relatively erect position. Note that he has brought his right hand well across his body before releasing the ball, thus securing the maximum arm swing and partially screening the ball from the batter.

Illustration 4—The start of the follow-through of the right foot; Mel Harder, Cleveland Indians. Note the wide, free swing of the leg. Note, also, the comparatively erect position of this right-hander and the position of the throwing arm across his body.

Illustration 5—The start of the follow-through of the left foot; Fred Ostermueller Boston Red Sox. When this pitcher finishes his throw, he, like Harder and Earnshaw, is relatively erect. Note that his left shoulder is pointing toward the batter.

Illustration 6—At the height of the leg swing for a right-hander; Harry Johnson, Boston Red Sox. Johnson is another pitcher who finishes his throw in a relatively erect position. Note the position of his right arm and shoulder and the free swing of his right leg.



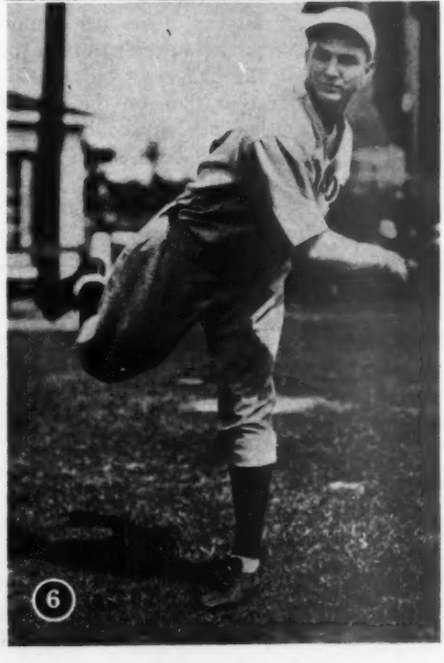


Illustration 7—At the height of the leg swing for a left-hander; Robert Grove, Boston Red Sox. The position of Grove in this picture is not so nearly erect as that of Johnson, Ostermueller, Harder or Earnshaw. At times, Grove bends even more at the waist than he does in this illustration. Note the position of his left leg and that his left arm is across his body and his left shoulder is pointing at or a little beyond the batter.

Illustration 8—The finish of the follow-through; Oral Hildebrand, Cleveland Indians. Hildebrand is bringing his right foot to rest at a point almost even with his left, which will place him in postion to field batted balls that come his way.

Illustration 9—The finish of the follow-through; Lynwood Rowe, Detroit Tigers. Note the extreme bend at the waist in the follow-through of this pitcher. Note, also, that the positon of Rowe's feet is such that he can easily field batted balls. Rowe's body has pivoted so that his right shoulder points toward the batter, which has allowed him to attain the greatest whip and follow-through of arm and body, with the least strain on the arm.

Illustration 10—The finish of the follow-through; Carl Fischer, Detroit Tigers. This pitcher, like Rowe, reaches almost to the ground on the follow-through. The position of his feet, almost on a line, allows him to maintain his balance and field batted balls. Note that neither Rowe nor Fischer takes an extra step on the follow-through.

Illustration 11—A common fault on the follow-through; bringing the back leg too close to the front leg, making a cramped and strained position. In this picture, Vernon Gomez, New York Yankees, is not demonstrating his usual good form.

Illustration 12—Another common fault on the follow-through; failing to make full use of the rear leg, allowing it to drag, and thereby lessening the effectiveness of the pitch. This picture of Alvin Crowder, Detroit Tigers, does not show that pitcher in his best form.

The Basketball Team in the Tournament

Tournament Strategy

By H. Cecil Baker

Granite High School, Salt Lake City, Utah

GUIDING a team successfully through the tournament really begins with the first call for basketball in December. At this time, most of the daily practice is taken up with fundamentals. If basketball fundamentals are mastered by the players who have natural ability for basketball, the coach has a good background to work on.

In Utah, all league games must be over this year by March 1st in order that tie-offs may be played, and the sixteen teams who have qualified be given a few days of rest before entering the tournament, March 13th.

At Granite High School, it is our aim to develop our team slowly. We keep in mind that the team should show improvement in each game. If our team can reach its maximum ability at tournament time, we have accomplished our goal. Tournament play demands mental alertness and good physical condition.

Ten days before the tournament, we spend about one hour daily in working mainly with individuals of the team. They brush up on shooting, dribbling, free throwing and passing. We may add two or three signals to a half dozen we already have, a couple of out-of-bounds plays and a very few set plays. The players must master these plays to such an extent that they become almost second nature to them.

H. Cecil Baker

We instill into the minds of our players the need of being in excellent condition, because the team that emerges victorious in the tournament must win four games in four days. We allow no fried foods, but give the players plenty of oranges, especially right after a game. We see that they have ten hours of sleep on the night before the game. They keep off their feet and do not have much water to drink during the day of a game. They eat a light lunch four hours before the game; then they read or keep their minds occupied on something besides basketball. They have a couple of hours of sleep, and after the sleep they take a brisk walk out in the fresh air.

The tournament with us is a serious matter. The players are not allowed to see any games in which they do not play. Our opponents are scouted and the information gained is handed out to the team.

ARTICLES on the basketball tournament by four outstanding high school coaches were published last month. Presented here are two more articles on the same subject. Like the coaches whose articles appeared in the preceding issue, Allen Dunaway and H. Cecil Baker have guided basketball teams to two successive state championships.

We believe in having our boys eat plenty of good wholesome home cooked food. Our players eat and sleep at home in preference to being subjected to strange food at restaurants and to new beds. They are always taken home in private cars after each tournament game and instructed to sleep as long as they can. The next morning they should enjoy a hearty breakfast and attend school and follow their daily routine as nearly as possible. We have a practice of giving the players a good alcohol rub daily.

In the dressing room before a game, everything is quiet. That particular game is all that concerns us. We review our opponents' strong points—also the weak ones—both offensively and defensively.

We generally use the zone defense; if this defense holds our opponents down fairly well, we play it for the reason that it conserves the strength of the players. If we meet a team of good long shooters, we change to a man-to-man defense. It is quite important to have at least two types of defense, as they keep other teams guessing. This is also true of the offense. Certain types of offense will not work well against a zone defense, or a man-to-man defense. A team may easily stop a certain type of offense and in turn would have trouble in stopping a different type of offense.

Allen Dunaway

Getting the team in the proper mental attitude is the hardest job the coach has to confront. I believe the team should play its best always. It should get the habit of doing its best, never letting down for one second.

Substituting players is an important part in the success the team may have in the tournament. The regulars should be given all the rest possible. Sometimes, however, games are lost by substituting too early in the game.

A mastery of fundamentals, a co-operative attitude among players and the desire of the players to win play a very important part in the success the team enjoys in tournament play.

Mental Attitude of Tournament Players

By Allen Dunaway

Pine Bluff, Arkansas, High School

ONE of the important considerations in regard to the basketball tournament is the preparation that should take place during the six or eight weeks before it occurs. During this time, I believe, the team should have a thorough drilling in fundamentals. To go successfully through a hard tournament, players must be in the pink of condition, and that cannot be gained in a week of hard drilling just before the tournament. I like to use the last week before the tournament to lighten up the work and shorten the practice periods. Our team does very little scrimmaging during this time. I be-

lieve that the mental attitude of a team should be built up to the right pitch during this week.

After arriving at the place of the tournament, I like to give our players a short practice period on the court before playing on it. Also, I believe in having the players eat at least three hours before the game, if possible, and in having them rest in bed before going out on the floor. It is wise for them to take a short walk of ten to fifteen minutes before playing. If possible, they may walk to the gym.

In my opinion, it is possible for the coach to talk to the players too much before the first game. I firmly believe that many coaches, in an effort to key up their players, get them so excited and nervous that they cannot play their best. The players are usually a little nervous and excited—just because it is the first game. I believe that each game should be taken as it comes. I do not like to have players watch the teams that they are expecting to play for more than a few minutes at the most. After their own game, they may, perhaps, be allowed to wait and watch the first quarter of the next game. I believe it is wise to keep them away from the tournament and the gym just as much as possible. Also, I believe it is unwise to let them stand around the lobby of the hotel or the drug store between games.

I like to keep the team together as much as possible. If the boys are playing late in the afternoon and take a rest or nap early in the afternoon, it is very important to have them take a walk or a short hike before playing.

After the first game in the tournament, the coach must use judgment in what he says to a team before the other games. If he knows the next game can be won without any attempt to key up, he certainly should not try to key up his players and have them run up a large score.

If there is a tendency on the part of a team to be overconfident, this must be fought by the coach. If the team lacks confidence, then this must be given by the coach. I believe these two attitudes can be given in different ways. If the team is overconfident, the coach may be unusually pessimistic; if the team lacks confidence, then the coach may be unusually confident.

Some time during the tournament, it will be necessary for the team to play better than usual, or what is known as inspired basketball. The coach should attempt to determine which game this will be by carefully scouting and watching the teams his team is likely to have to play. Then, everything possible to inspire his team for this game should be attempted.

One of the most important things is the mental condition of the players before the championship game in a tournament. The coach should be a good judge of his players. Knowledge of them can be gained by being with them as much as possible and by keeping them together. One of the marks of a true champion is the ability to play relaxed under pressure. The team is bound to be under pressure in a championship game. The coach can help the team a great deal by his attitude before the game. What he says to the team before the game may be entirely different on two successive years. In one case, he may tell the team to go out and play careful basketball by being sure a man is open before the ball is passed to him, and to shoot only close-in shots. I believe this kind of talk tends to make the players tighten up. On the other hand, if the coach tells them to go out and cut loose, take every possible open shot at the basket, they will have a tendency to loosen up and play relaxed ball. I have tried both types of instruction, and I firmly believe that the latter is by far the more effective for a championship game.

Does the 10-Second Rule Achieve Its Purpose?

By John C. Foti

MANY arguments have been advanced for and against the 10-second rule in basketball. Certain conferences in Wisconsin use it, while others do not. I believe the same situation exists in other parts of the country. There is a belief among some coaches, players and spectators that 10 seconds is not enough time in which to formulate an offense. Since the intention of the rule makers was to speed up the game and prevent as much stalling as possible, I undertook to study the effect of the 10-second rule on the play of teams in actual games.

I watched the Milwaukee State Teachers College play the LaCrosse State Teachers College in one of their crucial league games last year and with a stop-watch I timed the advance of the ball from the back court to the front court. The figures speak for themselves. In the first half, the Milwaukee team advanced the ball 24 times from the back court to the front court, the average time for the advances being less than 3 seconds. The LaCrosse team advanced the ball 28 times from the back court to the front court during this same half, averaging slightly more than 3½ seconds for the advances.

Details of this first half are shown in an accompanying table. The first column under the name of each college indicates the number of the time the ball is advanced; the figure directly opposite gives the length of time in seconds expiring from the time the team took the ball in its back court until it passed it across the center line. For instance, the fourth time the Milwaukee team advanced the ball across the line, 3.9 seconds were required to do this. LaCrosse required 1.2 seconds to advance the ball across the center line on its seventh attempt. The greatest length of time required by either team to advance the ball across the line in the first half was 7.3 seconds, on LaCrosse's twenty-first attempt.

The second half of the game shows results that are not dissimilar. Milwaukee advanced the ball 22 times with an average of 3 seconds for the advances. LaCrosse's average for 21 advances was 4½ seconds.

I attended the Wisconsin State High School Basketball Tournament held in the University of Wisconsin Field House in March, 1934. I timed the advance of the ball from the back court to the front court for several games, and the results are in general similar to those of the college games.

In one of the tables presented here are shown the results of the first quarter of a game between Kenosha High School and Wisconsin Rapids High School. Kenosha advanced the ball 10 times in the first quarter, averaging 6.95 seconds for the advances. The average of the Wisconsin Rapids team for 12 advances was 2.53 seconds. Kenosha's average for the second quarter was 6.1 seconds on 8 advances; the average of Wisconsin Rapids on 14 advances was 2.82 seconds. The score at the end of the half showed Wisconsin Rapids leading Kenosha, 17 to 8. Kenosha's average for the entire game was 6.02 seconds on 32 advances; the average of Wisconsin Rapids was 2.66 seconds on 41 advances.

It will be noted in the table that Kenosha violated the 10-second rule twice in the first quarter without being detected by the officials. In the entire game, violations of the 10-second rule, including those not detected and penalized, were as follows: Kenosha, five in the first half and two in the second; Wisconsin Rapids, one in the first half and four in the second.

In other high school games I timed, I found fewer violations of the 10-second rule. In the first half of a game between DePere High School and Mayville High School, DePere violated the 10-second rule three times; Mayville once. The officials detected and penalized all of these violations. DePere's average for 8 advances in the first quarter was 5.4 seconds; for 10 advances in the second quarter it was 4.57 seconds. Mayville's average for 8 advances in the first quarter was 4.63 seconds; for 9 advances in the second quarter it was 4.46 seconds.

In the second half of the game between Superior Central High School and Madison West High School, each team violated the 10-second rule once; the violation of Madison West, 14.7 seconds, was not detected, however. In the third quarter, Superior Central advanced the ball 13 times, averaging 4.36 seconds. Madison West in the same quarter also advanced the ball 13 times, with an average of 4.56 seconds. In the fourth quarter, Superior Central's average on 9 advances was 4.77 seconds; Madison West's was 5.03 seconds on 12 advances.

While it is unwise to generalize from insufficient data, the study has been carried far enough to venture these conclusions:

1. The figures indicate how little time is spent in actual games in bringing the ball from the back to the front court when the games are played under the 10-second rule.

Milwaukee State Teachers College versus LaCrosse State Teachers College First Half

Milwaukee		LaCrosse	
Time Ball Advanced Across Line	Seconds Required to Advance Ball	Time Ball Advanced Across Line	Seconds Required to Advance Ball
1st	4.0	1st	2.2
2nd	1.8	2nd	2.0
3rd	3.0	3rd	2.0
4th	3.9	4th	1.8
5th	1.4	5th	2.0
6th	4.0	6th	2.5
7th	3.0	7th	1.2
8th	2.0	8th	4.0
9th	3.0	9th	2.3
10th	3.4	10th	2.0
11th	1.6	11th	2.4
12th	3.3	12th	7.0
13th	3.0	13th	5.9
14th	2.0	14th	1.0
15th	2.0	15th	6.2
16th	4.4	16th	3.0
17th	3.5	17th	4.3
18th	5.0	18th	7.0
19th	3.3	19th	4.4
20th	4.0	20th	5.6
21st	2.3	21st	7.3
22nd	3.5	22nd	5.6
23rd	1.5	23rd	4.2
24th	2.0	24th	3.8
		25th	1.7
		26th	2.5
		27th	3.7
		28th	4.0

Milwaukee advanced the ball 24 times, with an average time of 2.95 seconds.

LaCrosse advanced the ball 28 times, with an average time of 3.62 seconds.

2. The figures show that, with very few exceptions, full 10 seconds of time are not needed to bring the ball from the back to the front court. This would tend to indicate that the 10-second rule is not a hindrance to the game.

3. The rule at present serves as a precaution against stalling and helps to make the game move faster without materially hindering the players.

Experiments of this kind are necessary to determine the strength and validity of a rule.

Another experiment that might be carried on is the timing of plays in the free-throw lane that involve the 3-second rule.

Kenosha High School versus Wisconsin Rapids High School First Quarter

Kenosha		Wisconsin Rapids	
Time Ball Advanced Across Line	Seconds Required to Advance Ball	Time Ball Advanced Across Line	Seconds Required to Advance Ball
1st	2.8	1st	1.2
2nd	2.1	2nd	5.6
3rd	8.0	3rd	3.2
4th	8.4	4th	1.5
5th	10.1	5th	1.2
6th	9.6	6th	2.4
7th	0.9	7th	1.5
8th	14.4	8th	3.0
9th	3.6	9th	2.1
10th	9.6	10th	3.1
		11th	2.9
		12th	2.7

Kenosha advanced the ball 10 times, with an average time of 6.95 seconds.

Wisconsin Rapids advanced the ball 12 times, with an average time of 2.53 seconds.

Form in Speed Swimming

By Irwin H. Cohen
Columbia Grammar School, New York City

SINCE 1927, Irwin H. Cohen has coached at the Columbia Grammar School. Previous to that time, he spent four years at Kohut School, Harrison, New York. His experience includes summer work at Camp Kohut, Oxford, Maine. Mr. Cohen was Chairman of the Swimming Committee of the Athletic Association of Private Schools of New York City, 1934-35.

IN studying speed swimming, one must first take into consideration the particular relaxation and form which will give as little resistance to the water as possible. There are three major competitive strokes; namely, the crawl, the breast stroke and the back stroke. It is my intention to cover each of these briefly, giving a few hints on how to attain the form so necessary in mastering them. It must be remembered that, to swim well, plenty of practice and patience are essential.

Crawl or Free Style

THE free style stroke, or crawl, is the stroke most commonly used. It has reached its popularity because it is considered the easiest, speediest and least tiresome of all styles of swimming. It is best to divide discussions on the crawl into three separate units: the stroke, the breathing and the kick. However, these three units, separate though they are, must be synchronized to obtain the good form already mentioned.

The stroke consists of an overhand movement from the shoulder. The hand is brought straight forward, with palm down and with a slight rise and bend in the elbow, until a maximum distance is reached. The hand, still out, straight ahead and even with the eye on the side in stroke, is then pulled downward through the water and in toward the thigh, from which point the movement is out and back until the greatest distance to the rear is reached. At this point, the palm from an upward position turns downward, and the arm is shot forward as at the start. The movement is exactly the same on both sides; while one arm is finishing the stroke, the other arm is pulling through. An uneven stroke will, of course, ruin the synchronization, destroying the form and, in consequence, lessening the speed.

For practice in stroking, the individual may stand before a full-length mirror and with a slight forward trunk-bend go through his arm movement. Or he may practice in shallow water where the same motion is carried on without the mirror, but where he has the additional value of the water resistance against the arms. He may also practice the stroke by placing his toes over the rim of the scum gutter and in this position do the stroking and breathing as in actual swimming. This last exercise may be considered the best because of the breathing in conjunction with the stroke practice. Tying the feet and swimming lengths of the pool may also be found to be of some advantage. In this practice, I suggest that a water polo ball be placed under the feet so as to obtain the proper arch of the back.

The kick, which, with the stroke, constitutes the power drive, does for the swimmer what the boat propeller does in pushing a boat through the water. The leg movement in the crawl comes from the hips and is used with an almost stiff leg and with little movement in the knee-joint. The feet are loose and the toes turned slightly inward. The beat is about six or eight to the stroke. Beginners should start with six beats to a stroke, three to each half stroke, and later on, if possible, increase this cadence. Swimmers have used as high as ten beats to the stroke, but this takes time and practice unless the swimmer is born with a natural ability for this fast kick. The only way to find the proper timing is by practice, which in time will show what is best for the particular individual.

The thrash should be about six to eight

inches on every kick. This is the distance between the upper toe and the lower heel.

Kicking may best be practiced by holding on to the end or side of the pool, with arms extended full length, even with the shoulder, so as to get the proper arch in the back, and proceeding to kick as directed. The head in this practice may be held high, or breathing may be worked in with the leg movement. The proper use of the flutter board up and down the pool does much to develop a good kick. Some swimmers find that a slight ankle snap on the down thrash of the kick often develops more speed.

Breath timing in the crawl is of great importance, as to obtain the maximum speed it is necessary to breathe without losing any of the rhythm of the stroke. To do this, the individual may breathe once on each complete stroke and on that side which he finds most convenient for him. In turning the head for the breath, it is a common fault to roll the shoulder out of the water. This is as unnecessary as it is to turn the head completely to the side. The purpose is to obtain the breath as quickly as possible, and to do so the swimmer should turn his head only far enough to snatch a mouthful of air while completing his stroke on the opposite side.

The breath is taken in through the mouth as the arm on the breathing side is in the air; the air is then released through the nose while the swimmer is completing the pull of the arm on the breathing side. The head should be in the water low enough so that the water is breaking across the bridge of the nose or just above the forehead. The swimmer sometimes finds it beneficial in the longer sprints to look just over the top of the water now and then to determine the course, though the markings on the pool bottom are best for that purpose.

Breath control is necessary if one expects to attain good form in the art of swimming. There is no way to acquire and retain proper timing except by actual practice in the water. Even though a person is in good condition, unless he practices daily he will find difficulty in doing more than two or three laps at a time without feeling almost exhausted.

Breathing may be practiced by entering the shallow water, placing hands on knees and putting the head in the water as in swimming. The head is then turned to the side as on a pivot. Inhaling is done through the mouth, and exhaling, in the water, through the nose. Another method of practice has already been mentioned—that of placing the toes in the scum gutter while using the arms in conjunction with breathing.

The Breast Stroke

THE glide is one of the most important movements of the breast stroke. After each stroke has been completed, the glide must be held before another fast arm movement is taken. The head is kept turtle fashion within the shoulders and shot forward on the stroke, the back being held as high as possible. In the glide itself there is no movement; the feet are held together, the arms and hands are extended forward, the face is down.

In the stroke, the extended arms describe an arc as they are pulled backward to the side even with the shoulders, at which point they are bent at the elbows and shot forward and slightly upward for the glide. However, there is no bend until the arms are brought even with the shoulders, as in this way the swimmer secures the greatest distance on the glide. The hands are palmed to the back for the pull and palmed down for the glide.

The leg movement starts after the stroke. The frog kick is the one most commonly used for this style of swimming. The knees are brought up toward the body as far as possible, with the toes pointed outward, from which position the kick is hard to the side and rear; then together for the glide. The kick must be done with a snap to secure proper push for the ever important glide.

In the breast stroke, the head rides just under the surface or just above the surface, and before each stroke it is raised straight forward for the breath. The breath is taken in through the mouth and expelled through the nose as the swimmer goes into the glide. The best rule to govern proper form in the breast stroke is to try to have both sides of the body doing the same thing at the same time, for an uneven shoulder or kick is illegal. Even the head should not be turned during the race; and all turns and finishes are made with the two-hand touch.

The Back Stroke

THE back stroke is really, with slight differences, the crawl swum on the back. Though there are some differences in the kick and stroke, the fundamentals are the same. There is a diversity of opinion regarding the position of the head in this stroke. Some coaches consider that the head held straight back is in the best position, while others believe that the head held with the chin lowered and eyes looking in the general direction of the feet is preferable. I am of the opinion that the method best suited to the individual is the one to be followed. There are many fine back stroke swimmers who use both methods with equal success.

In the stroke, the arm is brought straight back from the side with the palm of the hand facing the feet. When the arm reaches a point above the head, the palm is turned slightly out for the pull and, as the elbow is bent slightly, the arm enters the water. The pull is straight through by the thigh, where the palm is then turned downward. It is often found better, in longer races, to pull the arm to the side through the water instead of straight under and by the thigh. This may be found to give a slight roll, which makes the longer distances less strenuous and aids relaxation. It must be remembered that in any short race this rolling will tend to lessen the speed of the competitor. Therefore the coach must use discretion and consider the distance of the event when teaching a particular stroking method. On completion of one arm motion, the other arm begins its recovery. The timing is of utmost importance.

There is a slight bend in the knee for the back stroke kick, but most of the drive is from the hips, with the toes pointed slightly inward and the ankles relaxed. The thrash is approximately the same as that used in the free style or crawl stroke. In the kick, the toes should break water slightly. This kick may be practiced conveniently in a corner of the pool, with arms along each side of the corner. Kicking lengths of the pool with arms above the head is also good practice but rather hard to do well.

Regulated breathing is as essential in the dorsal swim as in the other strokes. The best method and the easiest to acquire is to inhale on the back stroke of one arm and exhale on the back motion of the other. Inhaling is done through the mouth; exhaling through the nose. In this way, there is less chance of being gagged by water passing over the face.

Turns

NO article on speed swimming would be complete without a word on turning. The turn is almost as important in the race as the swimming itself. In a race as short as the 50-yard free style, a bad turn can ruin an otherwise fine performance. It is only through special, patient practice that good turns become a habit. Turns of the proper variety should be done during the daily laps, but special attention is always necessary, because often during laps the distance swum takes the necessary zest out of the turn.

There follows a brief resumé of the proper turning for the three major strokes:

Free style turning should be taken on the arm that first reaches the end of the pool. If it is the right arm, for instance, the swing is to the left. The swimmer must be in close enough so that the turning arm, which is really a pivot, is on the pool end from elbow to hand. The fingers point downward with the elbow up. This is almost the same position as that in the stroke before the pull. As the turn is commenced, the head is dropped and swung to the turning side with the ear down. The push of the turning arm brings the individual around. In this position, the feet are raised against the pool end, and the knees are bent under for the drive. It is necessary for the elbow to be in close

(Continued on page 36)

Outstanding Football Plays from Outstanding Coaches

THE football plays shown here were diagramed and explained before the Fourteenth Annual Meeting of the American Football Coaches Association held at the Hotel Pennsylvania, New York City, December 27-29, 1934.

Five outstanding coaches, Lloyd Jordan of Amherst College, Adrian H. Lindsey of the University of Kansas, James Phelan of the University of Washington, Stanley L. Robinson of Mississippi College and Clark Shaughnessy of the University of Chicago presented these as the outstanding plays of the 1934 season seen in their respective sections of the country.

Coaches now holding spring practice may find use for a number of these plays.

Diagram 1 shows a cut-back which went 75 yards for a touchdown against one of the East's strongest teams. The ball went to 3, who started to his right and cut through the line between the defensive left tackle and guard and then broke sharply to his left. The right end and 4 teamed on the opposing left tackle. Backs 1 and 2 took out the defensive left end. The left end faked at the opposing tackle and cut across for a secondary player back of the left side of the defensive line, while two other linemen took out the defensive secondary men backing up the right side of the opposing line. The right guard ran interference for 3.

A spinner play is shown in Diagram 2. This play also resulted in a touchdown against a strong Eastern team. Back 3 took the ball from center, spun, went through the line and, when about to be tackled by the defensive left half, passed laterally to a guard, who had taken a zig-zag course down the field. Other assignments were as shown in Diagram 2.

Diagram 3 shows the way in which an Eastern team gained considerable ground in running back a punt against a strong Southern team. The ball was kicked from the Southern team's 10-yard line and was caught by 1 on the Eastern team's 35-yard line. Player 1 cut sharply to his left and passed backward to 2, who started to his right. After gaining several yards, 2 passed backward to 3, and 3 in turn passed backward to 4 after having run several yards down the field toward his left. The ball's progress was stopped when 4 slipped and his knee touched the ground.

In Diagram 4 is shown a pass which started as a fake kick and which resulted in a touchdown and a victory against a team which, until this game, appeared to be the strongest in the East. The play started from punt formation with 3 back in kicking position. Back 3 faked to receive the ball and punt. Actually, the ball went to 2, who retreated slightly to his right and threw a pass of medium length over the line to the right end, who had started straight down the field and then cut sharply to his left. The effectiveness of this play depended, of course, largely upon the element of surprise and the cleverness of the fake by all players involved.

Diagram 5 shows another play used by an Eastern team which depended upon a clever fake. This play started as a place kick. The ball went to 1 as though he were to hold it while 3 did the kicking. The defensive players were allowed to sift through the offensive line almost at will. Back 1 took the ball and cut around to his left, while the offensive men went down

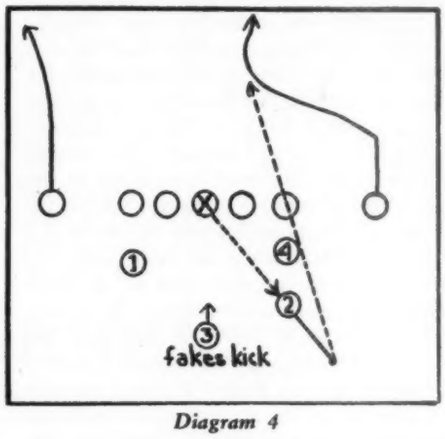


Diagram 4

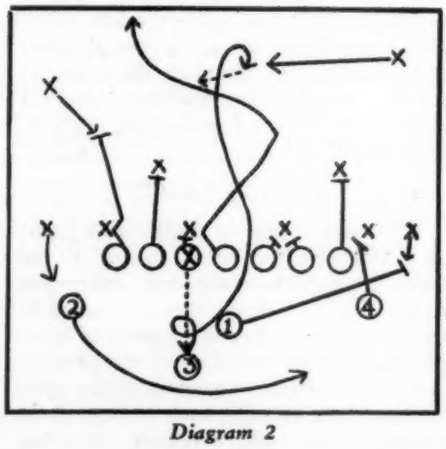


Diagram 2

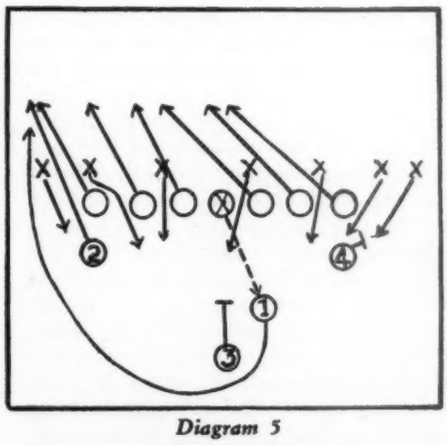


Diagram 5

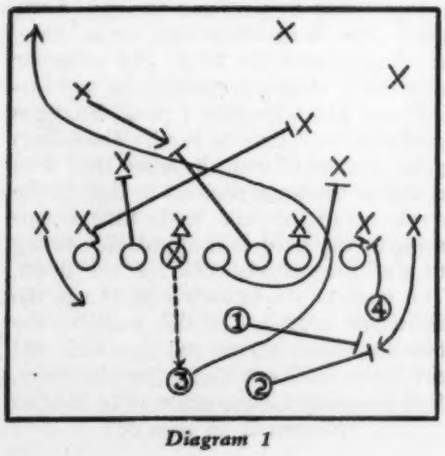


Diagram 1

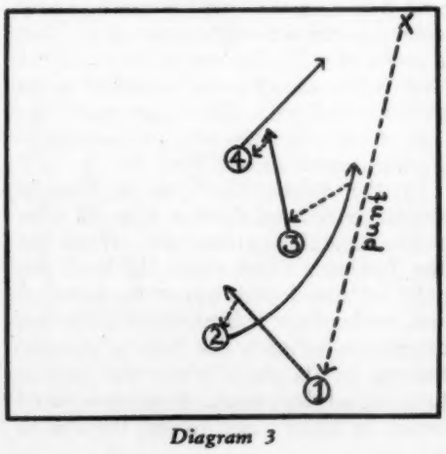


Diagram 3

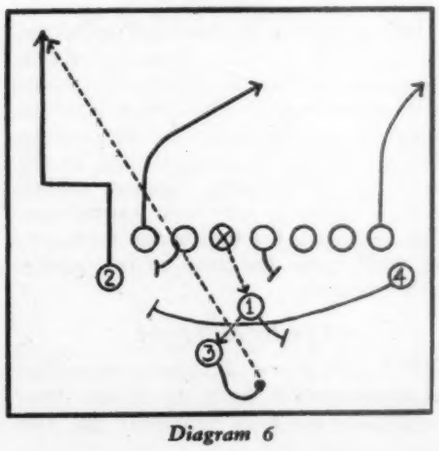


Diagram 6

to block the secondary defensive players.

The play shown in Diagram 6 scored three important touchdowns for one of the outstanding teams of the South. It appeared to begin as a single reverse. Back 4 started to his left as if to take the ball from 1. He went on, however, and protected 3 to the left. After 1 received the ball, he passed back to 3 and blocked to his right. Back 3 faded to the right and rear and threw a long forward pass to 2, who had delayed, gone down, out to his left, and then down. Other assignments were as shown.

Diagram 7 shows a play somewhat similar to the preceding, which was used to score a touchdown in the last two minutes of an important game, with the score standing 13 to 13. Both teams were among the strongest in the South, and, until this game, the team against which this play was used had not been defeated. The play started as a single reverse. Back 4 faked to take the ball from 3. Backs 1 and 2, preceding 4, swung to the left. This action pulled the secondary defensive players, especially the left half, over to their own right. Back 3 faked to 4 and then passed to the right end, who had delayed about four counts before going down the field.

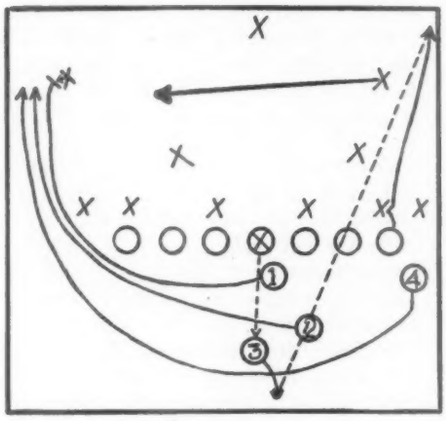


Diagram 7

Diagram 8 shows a play known as the "corkscrew," which was used by a Southern team from punt formation. The ball went to 1, who faked to give it to 2, but, instead, handed it to 3 as the latter plunged straight through the center of the line. The defensive right guard was allowed to cross into the offensive backfield and was taken out of the play by 4. The right guard and the center teamed on the opposing guard. The left guard and the right tackle went through for the defensive men backing up the line.

A weak-side plunge used successfully by an undefeated Middle Western team is illustrated in Diagram 9. The ball went to 3, who started to his left, the short side, as if to run wide. The opposing right end was thus drawn rapidly across the line. The opposing right tackle was allowed to charge across and was then taken out of the play by 1 and 2. The left end went through for the defensive center. The center and the man on his left teamed on the opposing guard. The lineman on the right of the center went through for the defensive right halfback. After starting to his left, 3 cut back sharply and plunged through the line.

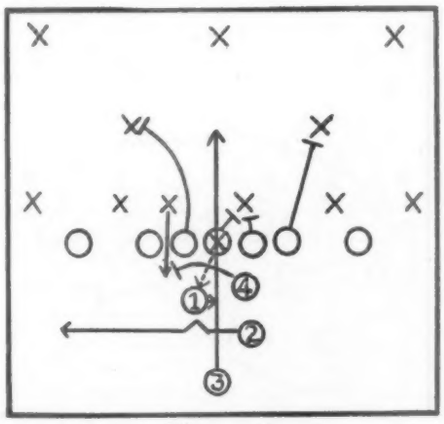


Diagram 8

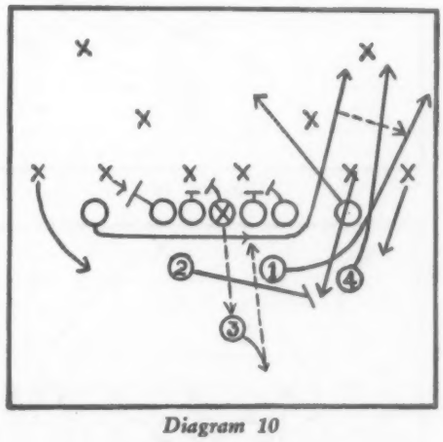


Diagram 10

Another good ground-gaining play, a forward pass behind the line to an end swinging around, followed by a lateral pass to a backfield man beyond the line, is shown in Diagram 10. This play was used successfully by a strong Middle Western team which was noted for its daring use of passes. The ball went to 3, who faded back as if to throw a long forward pass. The left end swung around behind his own line, received a short pass from 3 and cut back inside the opposing left tackle. When about to be tackled by the defensive fullback, he threw a lateral pass to 1, who had gone out to the right and then cut down the field. The opposing left tackle and end were allowed to charge across the line. The right end and 4 went down the field for the secondary.

Diagram 11 shows a strong off-tackle play that was used by a Middle Western team. Back 3 in this case was a very versatile player and capable of performing any duties expected of a backfield man. The defensive left end was allowed to charge deep across the line before being stopped by 4. The offensive left end and guard went through for the secondary. The opposing left tackle was blocked by the right end, who was assisted by another lineman whenever necessary. Back 1 went through for the defensive fullback. Back 2 started to the right, then cut down the field and took out the defensive left halfback. After taking the ball from center, 3 started to his right, cut back sharply, and changed direction to the right again after he had gone beyond the defensive left end, already taken out of the play by 4.

An effective end run employed by a versatile Middle Western team is shown in Diagram 12. The defensive left tackle was blocked by the right end; the defensive left end by 4. Backs 1 and 2 and the left end went down the field for the sec-

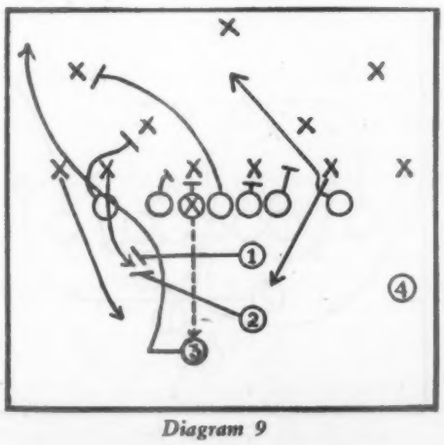


Diagram 9

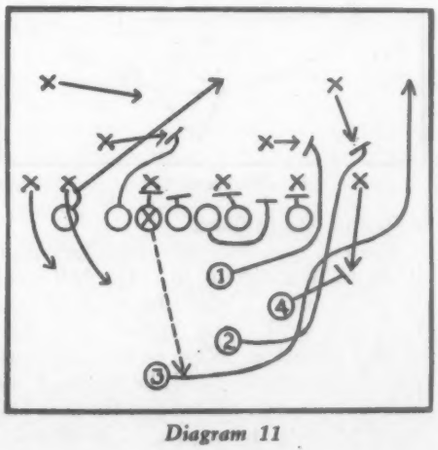


Diagram 11

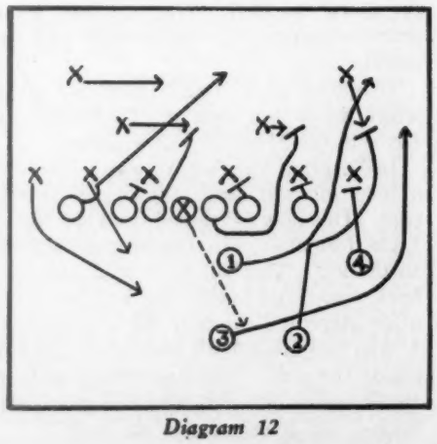


Diagram 12

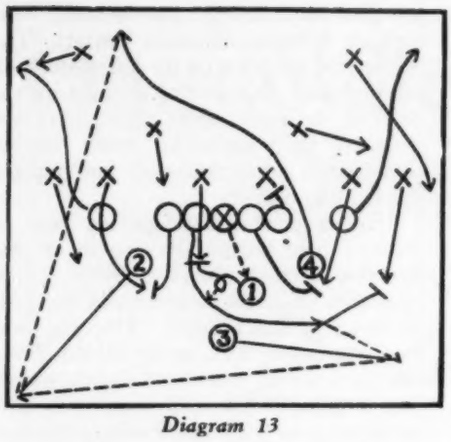


Diagram 13

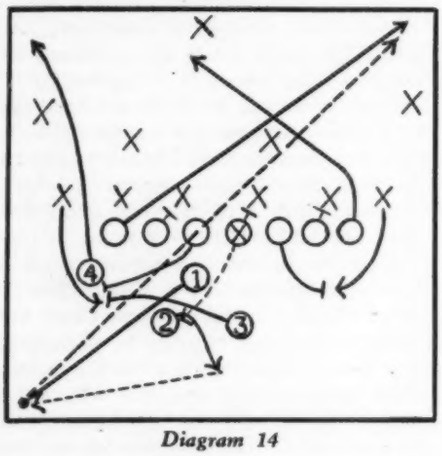


Diagram 14

ondary. The left guard went through for the defensive center, while the right guard cut behind his own line and then went through for the defensive fullback. Back 3 took the course indicated, running wide around the defensive left end.

One of the variations of a play which acquired the name, "The Flying Trapeze," and which was used by a light but clever Middle Western team, is illustrated in Diagram 13. Back 1, taking the ball, spun to his left and handed it to the left guard, who had pulled out of the line. The left guard ran to the right and, when about to be tackled, passed laterally to 3. Upon receiving the ball, 3 made a long lateral pass to 2, who had faded deep to the left. Back 2, in turn, made a long forward pass to 4, who had gone through the line and far down the field. The two ends went down as decoys and were possible pass receivers.

Diagrams 14, 15 and 16 illustrate plays which were seen west of the Mississippi River in the Missouri Valley region.

In Diagram 14 is a play which involved a long forward pass following a lateral pass. This play developed from the Notre Dame formation, with the backfield shifted to the left. The ball want to 2, the fullback, who faked to the right half, ran back a few steps and threw to the quarterback, 1, who had faded back and out to the left about 15 yards. The quarterback in turn threw to the left end, who had gone deep behind the defensive left halfback.

A forward pass from short punt formation, followed by a lateral, is shown in Diagram 15. The right end went down about 6 yards, turned and came back to meet the forward pass from 3. After catching the ball, the right end lateraled it about 5 yards to the fullback, 2, who had faked to block the defensive left end, but had kept on at full speed to the outside of the

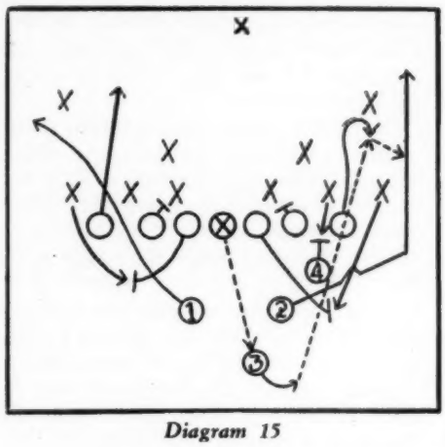


Diagram 15

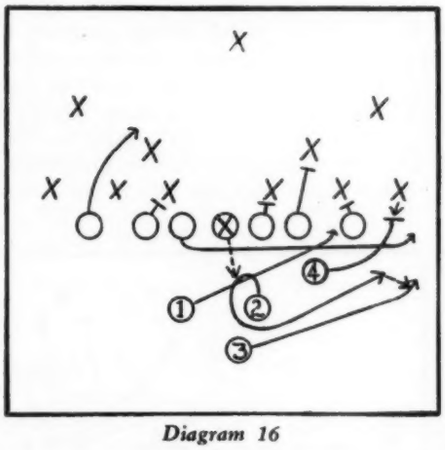


Diagram 16

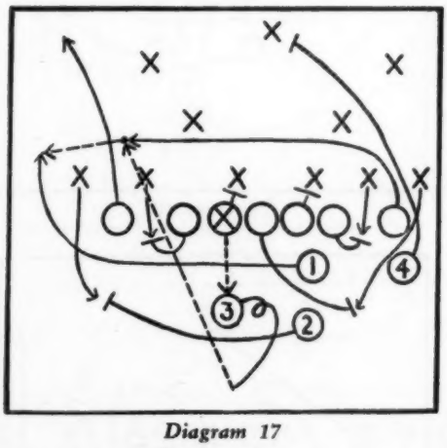


Diagram 17

defensive left halfback.

A lateral pass from short punt formation is shown in Diagram 16. The ball went to the fullback, 2, who stepped in to take it, faked to 1, spun around and then started off tackle. When he was about opposite the defensive end, he lateraled the ball to 3, who, on the snap of the ball, had started fast to the outside. The offensive right end blocked the opposing tackle. Back 4 blocked the defensive left end, and the left guard, assisted by the fullback, 2, after the latter had thrown the ball, led the play.

Diagram 17 shows a play used successfully by a Rocky Mountain team. This involved a forward pass followed by a lateral beyond the line of scrimmage. Back 3 took the ball from center, spun, faded and then passed to the right end, who had cut to the left behind the defensive line. The right end then lateraled the ball to 1, who had cut to the left behind his own line. Assignments of other players are shown in Diagram 17.

Two plays used by Pacific Coast teams are shown in Diagrams 18 and 19. Diagram 18 illustrates a forward pass in which 2 was a left-handed passer. After taking the ball from center, 2 ran to his left as if to follow 1 and 3 on an end run. Instead of continuing his run, he passed to 4, who had gone almost straight down the field. The left end crossed to his right and the right end to his left. The center, after passing the ball, went back to take out the defensive left end.

A spinner and fake buck that developed into a forward pass followed by a lateral is shown in Diagram 19. This play was also used with a left-handed player in the passer's position and was worked successfully against every opponent played by

(Continued on page 37)

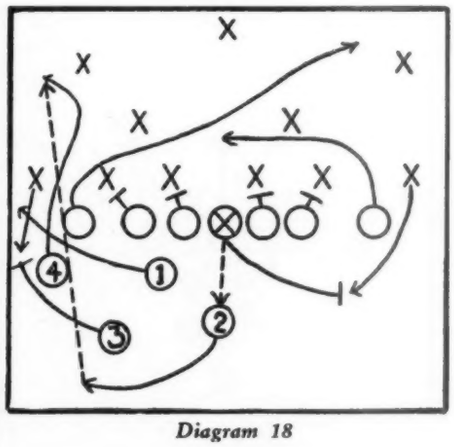


Diagram 18

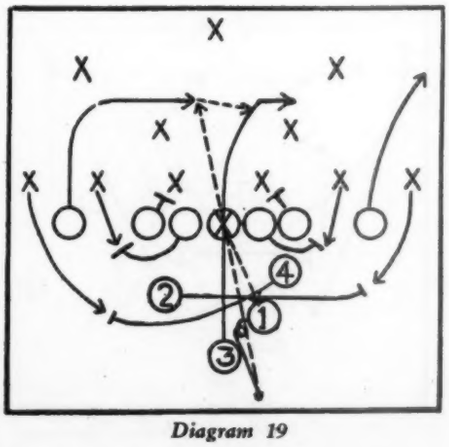


Diagram 19

Offensive and Defensive Play of Linemen

Offensive Line Play

By Bill Kern
Assistant Football Coach, University of Pittsburgh

OFFENSIVE line play means the development of individuals in the fundamentals and the details of line play to enable them to participate in the functions of the whole line as a unit. There are five very important factors in the development of an individual: (1) position or stance; (2) starting or charging; (3) running; (4) pivoting and (5) retention of balance.

FIRST: A correct position is the first essential in good offensive line play. Many painstaking hours must be spent in teaching a lineman proper stance. Naturally, the stance varies according to the system being taught. The stance at the University of Pittsburgh is a three point stance. The feet are almost straight forward, pointing outward slightly, and are directly underneath the man at a comfortable distance apart. The instep of the front foot is on a line with the toe of the rear foot, and the hand on the side of the rear foot is in a straight line with this foot and about a foot and a half ahead of the front foot. The back is straight, not parallel with the ground, but slightly tilted, and the head and shoulders are higher than the rest of the body. The same position must always be assumed whether the man is pulling out or charging ahead. A lineman must never point plays, and his feet must be placed so that he will not give the play away. In the teaching of position or stance, the physical characteristics or eccentricities of the man must be considered. It is well to conform to a standard stance, but, if a man is not able to do so because of his physical make-up, allowances must be made. Another important factor in teaching position is the point that the position of all linemen is not the same; that is, the end's position differs from the tackle's, the tackle's differs from the guard's, and, last, the center's differs from all the others.

SECOND: The initial charge on offense is very important. It is probably the most important single item in offensive football. Starting depends upon nerve impulse and reaction. Much time must be spent in developing fast starts both forward and in pulling out of the line. The first step usually decides successful blocking and it should be unusually short, with each succeeding step short and choppy, the charge starting low and gradually becoming higher. The man who gets there first usually wins.

THIRD: Running is one of the most important of all fundamentals. I am sorry to say it is sadly neglected by many coaches, even though football is essentially a running game. A man must first of all learn to run on the balls of his feet, and not flat-footed or on his heels as many players do. His weight should be well ahead of him, with his body in a position so that he is leaning forward and his arms are swinging in a backward and forward motion (not a cross motion) in order to pull himself along. His weight must help him—not hinder him. He must try to be relaxed at all times. His first steps should be short and hard, piston-like, gradually lengthening until he attains his maximum speed. A man is always better able to change direction and meet an emergency when he runs with short, quick steps.

PRESENTED here are two more of the excellent addresses on football technique delivered before the Fourteenth Annual Meeting of the American Football Coaches Association in New York City, December 27-29, 1934. Both of these deal with line play, one with the offensive and one with the defensive phase. Last month, four other addresses delivered at this same meeting were published. These were on forward and lateral passes. The complete proceedings of the Association meeting will not be printed in The Athletic Journal, but they are being published in booklet form and copies may be secured by addressing this magazine. Members of the Association need not make request, as their membership automatically entitles them to copies.

FOURTH: Pivoting is directly responsible for successful interfering or pulling out of the line. It must be done from a correct stance so that there is no pointing, and the start must be very fast. The pivot is made with the ball of the back foot and the hands and shoulders. The head, in fact the whole body, is used to help the individual out of the line. A pivot out of the line is a rotating motion combining a backward and sidewise turn which takes place simultaneously. More time is lost in bad pivoting than in running. The average man can run, once he gets out of the line.

FIFTH: Retention of balance has become one of the most important changes in recent years in offensive blocking. The cry has become "Stay on Your Feet as Long as Possible!" Naturally there are times when a lineman must leave his feet to block, but, to every one occasion when he must, there are many more times he leaves his feet when he should not. Along with this idea, screening, more than actual bodily contact, has become very common. Many times the mere presence of a man between the defense and the ball-carrier is sufficient.

The ability of a lineman to master these fundamentals makes it possible for him to fit into the efficient operation of a line as a unit and attend to his particular duties, which are divided into three phases; first, primary blocking in the line; second, blocking downfield; third, interfering and pulling out of the line. In all of these so-called departments of offensive play he must do four things at all times: First, take advantage of the starting signal. Second, watch carefully the position of defensive men both in the line and the secondary. Third, ascertain immediately what type of game the men on the defense are playing, whether they are tough or easy, whether they play high or low, smashing or waiting, or any peculiar type of defensive play. Fourth, know at all times, on all plays, the course of the ball-carrier before and after he passes the line.

Primary blocking in the line involves four distinct groups of plays: (1) line bucks, (2) running plays, (3) passes and (4) punts.

LINE BUCKS—The type of block used on a line buck is invariably a shoulder block. Two linemen in taking out a defensive man on line bucks should try whenever possible to ride him back into the secondary defense, hitting him around the thighs and gradually coming up on him until they reach his waist. The first steps should be short, choppy and fast. After making contact with an opponent, the offensive lineman should be sure to stay with his man, fully utilizing the weight of his own body, bringing his feet up under himself immediately, getting a good leg spread, keeping his body between the defensive man and the hole and continuing to drive, always making the defensive man come through head, shoulders and body of the offensive man. The offensive man must never fall on the ground after making contact with his opponent. If it is not possible to take the defensive man straight back into the secondary, he should be turned one way or the other; that is, one offensive man should hit him low, the other high. The low man should use a hip or crab block; the high man, a shoulder block. The charge must be timed so that the low man does not hit the defensive man first and turn him right into the hole; in other words, both offensive players should try to hit the defensive man simultaneously. So whatever the defensive man has started to do, one of the offensive men

Varsity Features

now available in popular priced merchandise

The Wilson Football Line for '35 is notable for many improved features. Greater protection and comfort, without impairment of action, is the basis on which these improvements have been developed. They are incorporated into various priced groups of Wilson merchandise. This makes it possible to obtain these outstanding advantages for your squad at a price which will fit your budget.

WILSON Football Pants

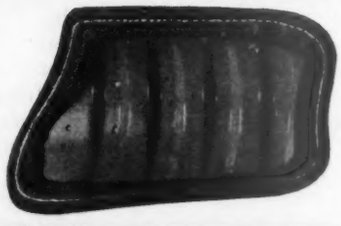
Action-freedom and comfort in squatting, running and standing—without pulling, binding or bagginess in the seat—has been gained by duplicating the seat design of fine riding breeches.

WILSON Corset-Back Helmet

Requires no "breaking in." Adjusts itself instantly! Provides complete protection and maximum comfort.

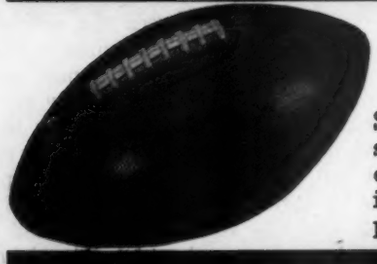
WILSON Thigh Guard

Light weight, snug fitting, with features providing great extra strength. Back is 8 times more repellent to water than any material hitherto used.



WILSON Cantilever

A veritable battleship armor construction of special light weight materials, with exclusive cantilever features acting as a cushion to absorb most of the shock before it reaches the body. It represents the highest type of development in this form of protection.



WILSON Counter-Balanced Football

Slightly more pointed; stream-lined; spirals accurately and more speedily through the air when passing or kicking.

WILSON Hip and Kidney Pad

Provides extra protection for all vital points: hip bones, kidneys, pelvic bones, lower ribs. Added feature helps keep belt in place. Feather-weight!

WILSON SPORTING GOODS CO.

CHICAGO, NEW YORK AND OTHER LEADING CITIES

. . . and in Baseball
Big League Features
at a price to fit your budget

Only long years of playing experience in the majors can give a player the actual knowledge necessary for designing genuine improvements in the construction of gloves, mitts and other baseball equipment.

The popularity of Wilson equipment with leading players in all leagues is due to the fact that it embodies the experience of such seasoned performers as Ray Schalk, Rogers Hornsby, Bill Terry, Red Faber, Ed Brandt and others who have proved their championship calibre for a great many years.

Wilson's equipment, for this reason, contains numerous practical features that multiply a player's natural ability and lessen error possibilities. This is the kind of equipment that every ball player should use, whether he's playing on a sandlot or on the carefully manicured diamonds of the majors.

Wilson offers you the greatest value possible in every price range, and you are urged to examine these wonderful gloves, mitts, balls and other equipment at the nearest sporting goods dealer. Wilson's Official League Ball, by the way, is used exclusively in the American Association and the Pacific Coast League.

Ray Schalk MODEL

Rogers Hornsby MODEL

Bill Terry MODEL

WILSON OFFICIAL BASEBALL

Wilson
SPORTS EQUIPMENT

WILSON SPORTING GOODS COMPANY,
2037 Powell Avenue, Chicago, Illinois

Please mail me without cost your new 1935 Wilson catalog.

Name.....

School.....

Town..... State.....

We buy mostly thru.....
(Name of sporting goods dealer here)

will be sure to hit him. Whenever possible, an offensive man should take a defensive man alone, and the other man go through to cut down the secondary. In blocking a man alone, the offensive player may employ a shoulder block, turning his opponent in or out. Or he may use a head-on charge, driving him into the secondary. The offensive blocker should get to his opponent very fast in both cases. If the opponent is to be flanked when he is playing a little on the outside, the offensive man should take a short step to the outside and then come back and take him in from the side, because after taking the short step to the outside the defensive man invariably charges inside, thereby making it less difficult to take him. Except in the immediate vicinity of a line buck, all other blocking in the line should be for specific counts, one, two, three or four, and then the blocker should immediately cut down the field to complete other assignments in downfield blocking. Here is a situation in which mechanics and fundamentals are not so important as definite knowledge of the *why* of football; in other words, why certain plays are called and how much time is required to execute them.

Running Plays—These plays may be to the strong or weak side, and may be end runs, reverses, off-tackle drives and so forth. The type of block used here is almost invariably a shoulder block, and, even in the immediate hole where the play is to run, the blocking is for certain counts. The nearer the blocker is to the hole where the play is to run, the longer the count; the farther away, the shorter the count, even to the extent that men the greatest distance away from the play on the opposite side of the line merely run in between defensive men and the play and continue on down the field to cut down the secondary. The men who do the blocking at the particular spot where the play is to run are always able, if the play is successful, to get downfield and protect the ball-carrier from the rear. In playing against linemen who drift, it is essential that offensive linemen make a very fast start, getting across the line before the defensive players begin to drift, and preventing them from getting to the play. It is understood, of course, that every coach has various methods, in the way of plays, to check drifting linemen.

Passes—The types of blocks used on forward pass plays are shoulder blocks and a body clip. In blocking on pass plays in the line of scrimmage, the offensive man does not start so fast as he does on other plays. He comes to a higher position, waits, braces himself and allows the defensive man to commit himself; then he blocks a hole, using a shoulder block to do so. When a lineman pulls out of the line to block on pass plays, he must bear in mind the fact that he must pull out just as fast and hard on passes as he does on running plays. Many boys seem to think that this is the time to take it easy and rest. The lineman who pulls out of the line on passes must know the exact position of the passer. He comes out and blocks either of two ways. He comes back fast and hard, gets set, waits for the defensive man to come in and then blocks him with a shoulder block, always to the outside, never allowing a man to get on the inside. The other method is used against defensive linemen, particularly ends and tackles, who smash in hard. Here again the blocker pulls out fast and hard, but, instead of attempting to set himself, he immediately clips the smashing lineman with a shoulder block, keeping his head and body on the inside, or he uses a body clip, cutting down the defense immediately. Lastly, a lineman blocking on passes should immediately run to the side lines and cover up after the ball is thrown.

Punts—Blocking on punts is very simple. It is done usually by keeping as tight a line as possible. One of the most important factors to be considered is the speed with which the punter gets the ball away. The length of time in blocking is then gauged accordingly. Each man on the line must have his man selected, informing his team mates to that effect. The block used is usually a shoulder block or merely a bump, breaking the stride of the defensive man as he is allowed to rush into the backfield. The blocker must make sure that his man is always driven to the outside and not allowed up the middle. Good punting is nullified by the ineffectiveness of linemen going down under the kicks. After a lineman leaves his man on the line, he starts down the field fast, looking up when he hears the sound of the punt to judge the direction of the kick. The first rule is to provide sufficient protection for the kicker—then to get down the field as fast as possible.

Blocking Down Field—Down the field, the types of blocks used are more varied. There are the shoulder blocks, both high and low, crab block, body clip and head-on block. There is also screening, for oftentimes the mere presence of a man between the defense and the play is sufficient. The most important factor for the blocker is keeping on his feet. He must never leave his feet unless it is really necessary. Poor timing three out of four times will cause a man to waste himself when he leaves his feet. The defensive player is naturally expecting someone to come through to cut him down, and, if the offensive man comes through directly at him and leaves his feet, the offensive man misses, or the defensive man is able to recover and still get into the play. The blocker should rarely run directly toward a man. He should pick out a spot between the defensive man he is to take and the course of the ball-carrier, and naturally the defensive man must come through him to get to the ball-carrier. When this happens, the blocker uses any of the various blocks, preferably the high shoulder block, or merely a bump. If necessary, he clips the defensive man. If the defensive man does not come over to get in the play, the offensive player continues on downfield. In this way he does not waste himself and oftentimes can account for two men. The most important factor in downfield blocking, I would say, is that the men must stay on their feet as long as possible. The Coach of Today yells "Stay on Your Feet." A few years age the cry was "Leave Your Feet." The offensive men must all be sure of their duties on all of their plays against the various types of defense such as the 6-2-2-1 regular and modified, the 6-3-2, 7-1-2-1, 7-2-2, 7-3-1, and any other peculiar types of defense that may be used by the opponents.

Pulling Out of the Line and Running Interference—Pulling out of the line is dependent upon three things: first, the pivot; second, balance; third, direction. Each is dependent upon the other If the pivot is right, the balance will be good, and if a man has proper balance his direction will be right. There are four recognized methods of pulling out of the line: first, from a three point stance, stepping into the backfield with the front foot first; second, from a squatting position with the feet parallel, stepping into the backfield with either foot; third, from either of these positions, jumping out of the line into the backfield; fourth, the method as used at the University of Pittsburgh, pivoting on the back foot with a rotating motion. I will briefly discuss the last method.

Successful pulling out is dependent on a good, fast pivot. The position of the man for pulling out should be the same as for starting ahead, and the feet should not be placed so as to give the play away. If the team uses the huddle, men may change their feet to suit plays and occasionally place their feet on line bucks as they do when they pull out, thereby crossing up the defense.

A lineman should leave his position at the sound of the starting signal, anticipating the signal with the quarterback, not after he has heard the signal. He pivots on the back foot and pushes himself around in a rotary movement of the body with the forward hand and foot, jerking the body around sidewise, without becoming erect, and using the head and shoulders as much as possible to bring the body around. Naturally, the depth of the first step varies according to the play, and the pivot also varies accordingly. The player uses either a quarter pivot, half pivot or full pivot. The deeper the man is to run into the backfield, the farther back into the backfield the front foot is brought on the first step. A definite distance back should be specified for every

Northwestern's 9th Annual Coaching School Offers:

LYNN WALDORF
Northwestern

(1) Famous Instructors
(2) Two Hours College Credit
(3) Courses in All Sports
(4) Many Added Attractions
(5) A Glorious Vacation

FRANCIS SCHMIDT
Ohio State

DUTCH LONBORG
Northwestern

Two Never to Be Forgotten Weeks
AUGUST 12th to 24th

LYNN WALDORF, Northwestern's new coach; FRANCIS SCHMIDT, Ohio State's daring exponent of the open game; BURT INGWERSEN, noted line coach for Biff Jones at Louisiana State, now of Northwestern; DUTCH LONBORG, Northwestern's successful basketball coach—these men constitute the BIG FOUR at Northwestern University's ninth annual Summer Coaching School. Courses will also be offered in TRACK, SWIMMING, GOLF, TENNIS, and ADMINISTRATION by members of Northwestern's athletic staff.

BURT INGWERSEN
Northwestern

WALDORF AND SCHMIDT HEAD FOOTBALL COACHING STAFF

LYNN WALDORF and FRANCIS SCHMIDT turned in two of the finest coaching jobs in the country last year. In his first year at Kansas State, Waldorf produced an eleven that won the Big Six championship for the first time in the history of the school. His coaching system is based upon the single wing-back which he varies by use of the double wing and a box formation.

Francis Schmidt literally dazzled the Big Ten with the brilliant array of open football that he unleashed in his first year as head coach at Ohio State. His unorthodox attack has introduced an entirely new conception of offensive football. Schmidt has conceived a daring, open attack that warrants the study of every coach in the game.

TWO HOURS COLLEGE CREDIT OFFERED COACHES TAKING COURSE

Two hours of college credit are offered to coaches who successfully complete the two weeks' course. The Northwestern University Summer Coaching School is conducted by the Department of Athletics in conjunction with the School of Education. This is the first year that credit has been offered in the Coaching School.

Coaches who are working towards advanced degrees or who are required by state regulation to obtain a certain amount of summer credit each year will find the Northwestern Coaching School in a position to fill their needs. Courses are offered in football, basketball, track, swimming, golf, tennis and administration.

COMBINE VACATION WITH STUDY ON CHICAGO'S FAMOUS NORTH SHORE

Northwestern's Summer Coaching School has become the annual get-together and "gossip-fest" of the nation's coaches. . . . Its central location, big league baseball, golf, and swimming in Lake Michigan make the school an ideal spot to spend your vacation and at the same time exchange ideas with the nation's outstanding coaches. . . . Excellent living quarters near the lake are available at moderate cost. . . . Special accommodations for coaches with families. . . . Mail in the attached coupon for additional information. . . .

K. L. WILSON, ATHLETIC DIRECTOR
Northwestern University, Evanston, Ill.

Please send me additional information concerning Northwestern University's Summer Coaching School.

Name .....

Address .....

City ..... State .....

play, such as 2½ yards, 3½ yards, 4 yards or 5 yards.

The first step should be short and choppy. The body should be in a crouched position with the head raised, the player looking ahead instead of into the ground. The arms should be swinging and the body relaxed, ready to change course in an emergency to take any opponent breaking through the line. Naturally, on plays in which a lineman is to flank defensive men he comes around deeper, and on plays in which he is to take defensive men out he comes out closer to the line. This involves one of the most important and interesting phases of interfering; that is, linemen, particularly guards, blocking defensive ends and tackles on close plays such as cross-checks, "suckers" and the like.

Linemen should be taught all the various recognized blocks and be encouraged in using more than one type of block so that the defensive men will not become accustomed to being taken in only one way. Usually a lineman will stick to two or three ways which are particularly adaptable to his liking and style.

On sweeping plays his course should be angling so that he will not be bumped by his team mates. Usually he runs in the course of an arc, and should learn to cut down the field at the right time. On all plays, one particular lineman should be made responsible for taking the interference down the field at the proper time.

A good pivot gives a man proper balance as he pulls out of the line. Without proper balance he is not able to do his job efficiently. He must have it to be ready to change his course to make contact with an assigned man if the latter attempts to feint or dodge. Types of blocking in running interference are about the same as in blocking down field. First of all the player must learn to block so that his head and body are always between the defensive man and the ball-carrier. A large percentage of blocking on sweeping plays is a mere screening of the opponents from the ball-carrier, and it is usually unnecessary to knock them down. At other times it is sufficient for a blocker merely to shoulder an opponent long enough for the ball-carrier to pass; then to go on down the field and take some other player. A man who leaves his feet is usually finished for the play, and often, due to poor timing, fails to take his first man.

Sometimes it is impossible for a man to get between the defense and the ball-carrier as he is supposed to do; then he should run right into the defensive man head-on and knock him down. Before he can do any of the above things, he must have his man in the defense picked out and learn as soon as possible what type of game he is playing.

The best blocking in the world on the part of the line can be nullified by ball-carriers who cannot use effective blocking.

This is the theory of offensive line play as it is expounded at the University of Pittsburgh. Many of you are probably saying to each other that it is the same old "bunk." It is, and that is exactly just what it takes, a repetition of the same old "bunk" many times over, to develop a successful offensive line. It is not dependent upon what you teach or what you know, but *how* you teach what you know.

Defensive Line Play

By Harvey Harman
Head Football Coach, University of Pennsylvania

I WAS interested in hearing Harry Stuhldreher talk about forward passers and in his saying that forward passers need the technique of a piano player. The technique of a defensive lineman must be that of a piano mover.

Of course, the essence of any defensive play is good tackling. Coaches teach head-on tackling and ankle tackling. Several years ago probably the hardest type of tackling for us to teach was that in which the lineman went down through a broken field under a punt, or somehow got down the field, and had to get hold of a fast-moving back.

Nowadays, the lateral pass, used down field, has put an extra burden on the lineman and other players down the field, and I believe we have to spend a lot more time in broken field tackling, not only for linemen but also for our backs.

After playing Lou Little's team last year, I decided to teach my linemen how to tackle a player under a pile of six other players who throws a lateral pass out from underneath that pile. If we can't teach that, we'll spend all our time on tackling from the rear.

Harvey Harman

I might diagram the defensive line formation, and you would say, "What is your basic formation not only of the line but also of the backfield, and just what do you want to do with this line on defense?"

We know that nowadays a line has to be as versatile on the defense as on the offense; that is, players must be ready to go into the six-man line and into the seven-man line, and maybe sometimes into an eight-man line, and, quite often against certain teams, into as little as a four-man line. But, because of the short time, I am going to talk about line play as developed from a 6-2-2-1 defense. I am assuming in this discussion that the halfbacks come up fast and from the outside. I am assuming also that we have two good backers-up behind the line.

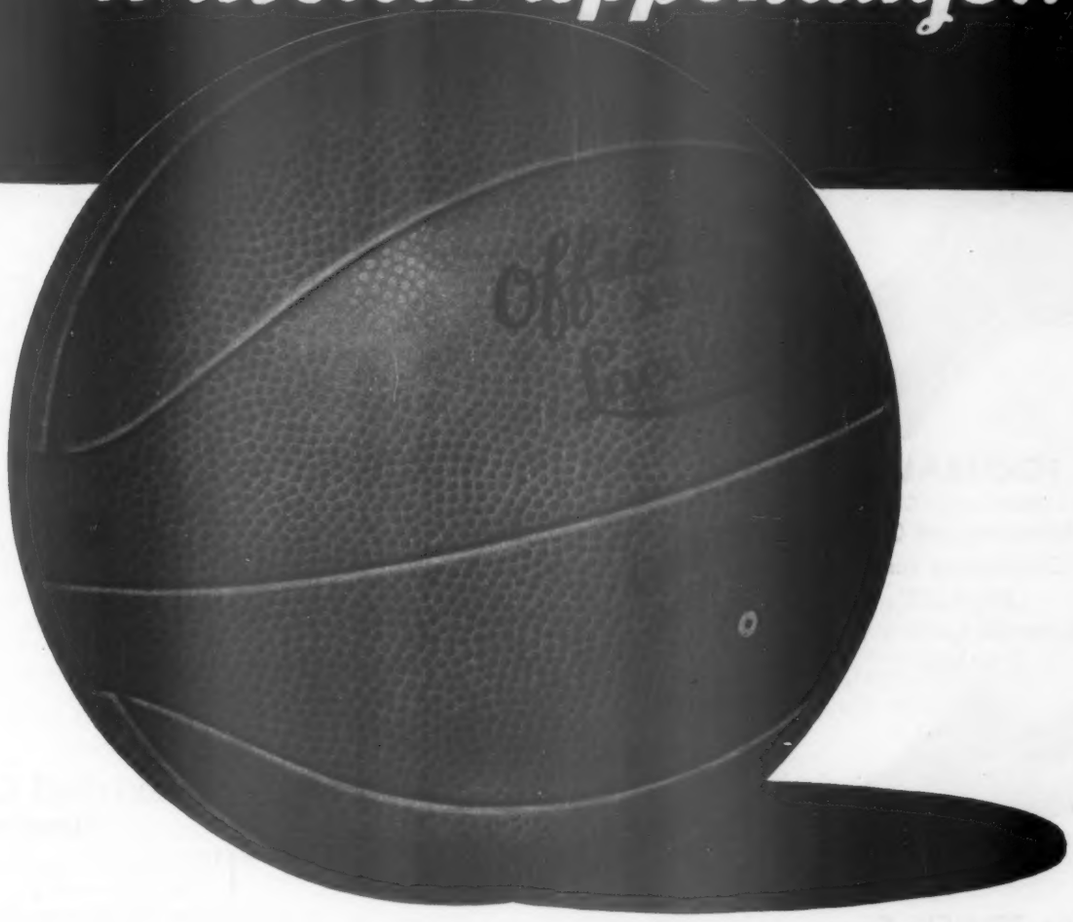
Now, then, just what do we want this line in a 6-2-2-1 formation to do? Well, first of all, we want it to bottle up the offensive. We are not trying to stop a play after a yard has been made. We want the defense to bottle up the offense before it is started, mess up the plays, and, if the tackle can't be made, at least send the ball-carrier across the line of scrimmage with nobody ahead of him, so that the backs can get at him to make the tackle.

I believe that it always pays to gamble on getting one or more men loose into the offense. That is the best way for a weak team to stop a strong team. If we get a man loose in there, the offense starts saying, "Where does that fellow come from?" Then the players get messed up in their assignments, and they stand back on their heels. We want to meet strength with strength in plotting our defense, and, when I say "strength with strength," I don't mean only the strength of our opponents' line but also the strength of their backfield.

Now I will explain what I conceive to be the duties of a defensive lineman in a 6-2-2-1 formation. We start out with our ends. We like the ends to line up in a crouched position, or semi-low position, where they can see a yard and a half or two yards outside their tackles, and not any closer to the ball than the back man is to the ball; also they must be wide enough so that the offensive wing-back, if there is a wing-back, can't easily box them into the center. So we will say they are a couple of yards out from their tackles. We like them with either one long step or two short steps to get across the line of scrimmage, ending up so that the inside foot is pointing in. Now, from there they don't stop and look, because that is what the offense wants. From there they charge in to stop an off-tackle play or a line play. They go in at the deep man if the interference is sweeping wide. This we tell them: "If the interference is loose, make the tackle; yes, but don't worry about that man getting around you. What we want you to do is go in

WE HAVE REMOVED

a useless appendage...



It's Tournament Time!

Time to choose the best basketball for your Tournament. You can make no better selection than—

GoldSmith

Laceless Official Basketball

No. X9L

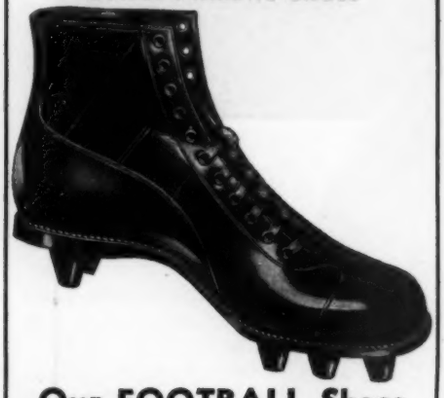
THE PERFECT BASKETBALL FOR PERFECT PLAY

We can give you that extra quick service that you require for new tournament uniforms.

THE P. GOLDSMITH SONS, INC.

JOHN & FINDLAY STS. CINCINNATI, OHIO U.S.A

The
Brouwer Research Last
Plus
The Genuine
"Flexi-Ball" Features
Plus
27 Years of Exclusive Quality
Athletic Shoebuilding
ARE PRODUCING
Better Athletic Shoes



Our FOOTBALL Shoes
Are Worn by the Champion
Minnesota and Other
Outstanding Teams
BECAUSE
Their Better Design Is a Real Aid
To Win

Our TRACK Shoes
Are Worn by
Most of the Athletes Who Set World
Records During the Past Year
Because they are
CORRECTLY DESIGNED AND
Fit the Foot in Motion
Which Means More Speed

OFTEN IMITATED
NEVER DUPLICATED

Write for New Folder Showing Many Interesting Facts and Proving how Correct Fitting Shoes Affect the Ability of the Athlete

Wisconsin Shoe Company
Quality Athletic Shoes
Milwaukee, Wisconsin

under that play head first." And we send them with their heads always pointing in. They protect the territory between themselves and their tackles.

The first thing we tell these linemen is to watch the ball, to go on the ball, unless the other team is using a starting signal and then to go with the backs, but out of the corner of the eye to watch the ball; next, to get across the line of scrimmage; third, to protect their territory.

Now, after they have done those three things, the fourth thing for them to do is to get to the ball in the shortest line.

The short-side end we play in the same way as the long-side end, exactly the same way. I know this looks like risky business, sending a man head first underneath the pile, but remember I told you we have the halfback coming up fast on the outside. If he goes across and sees the play swinging deep, he goes back in, but still goes in head first, not with his head back or out, but pointing in.

Now, let us say that the tackles are playing against a close line, with no flanking back. They can play a trifle outside of the opposing ends, on the outside shoulders of the ends. If the ends are split, and still no one outside of them, the tackles play in front of these ends. If an end is split away a yard or a yard and a half up to two yards, depending on the backfield formation, and a wing-back behind him, not flanking him, our tackle still plays in front of this end. With the wing-back outside, our tackle plays wider.

Now, we want our tackles to follow the four fundamental rules, watching the ball, getting across the line of scrimmage a couple of yards, protecting their territory, and going in the shortest possible route to the ball. The method they use depends on individual coaching. I suppose, if the tackle is playing the end alone, and no flank player is behind, he should be taught three ways, or maybe four or five, to make contact with the end.

The simplest way, of course, for the tackle to make contact is to come up with the hands on the shoulder of the end, or with the hands well in front all the time, and still playing low. The tackle may place one hand on the neck or shoulder and one on the kidney of the opposing end. Again, he may make a shoulder charge right through the end. Again, he may go underneath. I am talking of the situation in which there is no flank player. If the end is a rolling end, the tackle may trip him, using a side trip.

At Pennsylvania we teach three or four fundamentals to the guards, and they pick up some themselves. The first fundamental we teach is the submarine, the old Pennsylvania style of line play, the whole way across. Sometimes there is nothing more valuable than that. If we can, we teach the guards to come up on their feet, instead of lying with head and shoulders on the ground.

Over the top, we teach the double coordination. Some coaches at times—I think it is valuable—teach guards to slice through. The trouble with that is that it sometimes gets the guards off balance.

Now, on passes, linemen can do a mighty good job. I believe they are almost as important as backs. The long end on most formations and the short end on man-to-man, and sometimes on zone, should be in the play, counting the passer as a ball-carrier till he gets rid of the ball.

The tackles can do a good job in slowing up the ends before they go down, and then either float to the flat zone or come in to rush the passer.

Most coaches nowadays train the guards, at least one of the guards, to use the shiver charge on the man opposite and drop back into some zone that they want particularly taken care of. Now, the boys, after the coach gives them those fundamental points, will pick up much themselves. We tell the boys this: "Always keep in mind the position on the field, the down and the yards to go, which will mean a lot to you, not only in your initial charge but also after you get across, in telling you whether the play is going to be a smash through the center, a flank play or maybe even a pass. Never line up twice in the same position. And the best rule is to leave a hole and then cover it. Leave a hole and suck opposing players into it and make a charge so that you can cover it. This is a good way to trick the offense."

The boys themselves will pick up many little tricks to work on. I believe that a good defensive line is just as important to a team as a good offensive line, or a good offensive backfield.

Basketball Coaches' Meeting

THE annual convention of the National Association of Basketball Coaches will be held in Chicago, April 3, 4 and 5, according to an announcement by Howard B. Ortner, of Cornell University, President of the Association. Headquarters will be at the Hotel Sovereign.

Although the program is not yet complete, it will include technical discussions by leading basketball coaches and a panel discussion on standardized interpretation of the basketball rules. Basketball in the next Olympic Games and proposed changes in the rules will also receive the attention of the coaches at the meeting. Demonstration games will be played at the Loyola University Gymnasium, which is only a short distance from the Convention Headquarters.

Swimming in the hotel pool, an informal banquet and entertainment are listed among the enjoyable features of the Convention.

George R. Edwards of the University of Missouri, Columbia, Missouri, is Secretary-Treasurer of the Association.

NORTHEASTERN UNIVERSITY
ANNUAL COACHING SCHOOL

JUNE 24 **BOSTON, MASS.** **JUNE 29**

Again — AMERICA'S OUTSTANDING COACHES

FRANK THOMAS
University of Alabama

"JOCK" SUTHERLAND
University of Pittsburgh

ANDY KERR
Colgate University

DICK HARLOW
Harvard University

No expense has been spared to bring to the 1935 Northeastern Coaching School the country's outstanding coaches. Already newspapers have said, "Undoubtedly the country's finest coaching school". Notice the line-up of instructors: — **THOMAS,** coach of the Rose Bowl Champions — **SUTHERLAND,** famous coach of the Pitt Panthers — **KERR,** leading exponent of the lateral pass — **HARLOW,** undefeated at Western Maryland, now head coach at Harvard — **ANDERSON,** Rockne said of him, "Anderson is the finest instructor of Notre Dame line play" — **McKENNEY,** builder of defense against all systems — **HINKLE,** coach of the famous Butler Five whose basketball teams have been State, Sectional, and National Champions — **DOC KONTOFF,** whose lectures on Care of Injuries and Training were so well received last year that they are being repeated at the request of coaches.

FOOTBALL— *Notre Dame—Single Wing—Double Wing—Warner—Deception—Defense —Scouting—Line Play—Lateral Pass—Passing—Kicking*—MOVIES *of the Alabama Rose Bowl Victory*—TRAINING—CARE OF INJURIES—BASKETBALL—*Zone Defense—Man to Man Defense—Bucket Play—Actual Floor Demonstrations by Players*—ENTERTAINMENT — *Big Mid-Week Smoker* — ARRANGEMENTS MADE TO DISCUSS YOUR PROBLEMS INDIVIDUALLY WITH THESE FAMOUS COACHES.

Ideal location in the center of New England — Excellent equipment for lecturing and actual field demonstrations — Special Hotel and Dormitory accommodations — Reduced rates — Dates of school arranged so as not to interfere with your vacation or summer plans — Opportunities for entertainment — Golf, Swimming, and Free Theatre — Bring your wife — Tuition surprisingly low — Use attached coupon for additional information.

"HUNK" ANDERSON
North Carolina State

JOE McKENNEY
Boston College

TONY HINKLE
Butler University

"DOC" KONTOFF
Northeastern University

Prof. E. S. Parsons, Director
Northeastern University Coaching School
Boston, Mass.

Please send me full particulars of the Annual Northeastern Coaching School.

Name _____

Address _____

City & State _____

JUNE 24th TO JUNE 29th (Inclusive)

An Apology for Intercollegiate Athletics

By E. W. McDiarmid
Texas Christian University

PRESENTED here is the first part of a paper read at the annual meeting of the Sixth District of the National Collegiate Athletic Association, held December 15, 1934, at Dallas, Texas. Professor E. W. McDiarmid is a member of the faculty at Texas Christian University of Fort Worth. One of his avocations is the coaching of tennis. The remainder of his paper will be published next month.

IN presenting a paper on the subject of the value of intercollegiate athletics, the speaker is not to be charged with obscurantism—ignoring the obvious fact that many evils exist in connection with our intercollegiate games and sports. The plain truth of the matter is that in athletics, as another has said, titanic forces for both good and ill are playing upon students. The evils are serious. Of the truth of that there can be no denial.

This paper, which stresses the satisfactory features of athletics and which favors the continuance of intercollegiate games, is the fulfillment of an assignment given me a year ago upon my rather impetuous protest of the continually critical temper of our annual athletic powwows and also my expressed wish that we might have at least one meeting in which we could tell each other of the good that is being accomplished in and by athletics. Immediately I was told to produce a eulogium, so to speak, on athletics. If I did not realize a year ago just how big an order that was, I am fully aware of it now that I am called upon to make good.

Excellency of the Institution

UPON this one proposition, I am willing to stand, fight and bleed, if necessary. There come times when we need to create deliberately in our conferences upon this subject of athletics encouragement and good cheer, foregoing for the nonce the more customary attitudes of fault-finding, possibly defeatism. Permit me to give a philosophical turn to this particular point. Dr. L. P. Jacks, Editor of the *Hibbert Journal*, has recently written as follows:

"Preoccupation with social evils is not good for men in general. When the accepted method of reform is to attack the system which produced them, there comes into being a habit of mind which lowers the social vitality and causes a loss of social nerve at the very points where the need for both is greatest; while the temper of society, always the chief factor of its health, becomes sour, embittered, despondent and quarrelsome . . . The vast growth of the literature of discouragement and the general demand for the exposure of social culpability might suggest the conclusion that a conspiracy exists to deprive society of its self-respect."

Upon these words of Dr. Jacks, Dean Inge comments as follows:

"If it were not for our orators, many who are now cursing their fellowmen for the faults of our social system would be praising God that we have any social system at all."

While these words, of course, apply to our social system, they have a meaning for us in our smaller world of intercollegiate athletics. We must not permit the temper of our groups to become "sour, embittered, despondent and quarrelsome." The remedy for any such tendency is to have our souls refreshed and fortified by glowing reports of good accomplished, results achieved and victories won in the educational features of play on diamond, court and gridiron. A colleague of mine happened to tell me just the other day that he was in the habit of calling now and then meetings of the members of his staff for the sole purpose of hearing reports of the progress of his graduate students who are making good in other institutions and in various positions of usefulness.

Turning squarely away for the evening from the vexatious problems of "dumbbell sections" and utterly hopeless undergraduate students, he and his staff give themselves over to a glorious evening of encouragement and fortification for better work on the morrow. It seemed to me at the time, and it seems to me now, to be one of the soundest pedagogical devices of which I have ever heard. And that is the method to be followed this evening. "I am arguing for the excellency of the institution," said Dr. Johnson in 1768. In answer to critics he often expatiated on the advantages of Oxford for learning. Said he:

"There are excellent rules of discipline in every college. That the rules are sometimes ill observed, may be true; but it is nothing against the system. The members of a university may, for a season, be unmindful of their duty. I am arguing for the excellency of the institution."

May I repeat to you those words? I am arguing for the excellency of intercollegiate athletics, hoping that I may be able to give such a good report of genuine values that we all shall be cheered and encouraged to go forward hopefully.

Diagnosis of the Situation

FIRST of all, it seems to me that is a very satisfactory and encouraging thing that we know exactly what our problems are and what are the exact evils which we have to combat. As Malcolm in *Macbeth* named the king-becoming graces as justice, verity, temperance, stableness, bounty, perseverance, mercy, lowliness, devotion, patience, courage, fortitude, only to repudiate them, saying

"I have no relish of them . . .
Nay, had I power I should
Pour the sweet milk of concord into hell,
Uproar the universal peace, confound
All unity on earth"

so we can name the character-destroying vices of intercollegiate athletics just as exactly as he named the virtues.

Here they are: the insensate will to win at any cost, the turning of play into drudgery, newspaper notoriety, interference of thoughtless alumni, expensive coaching staffs, ruthless and profane coaches, the prostitution of high school athletes by recruiting and subsidizing, commercialism, the smothering of initiative on the part of the players, misbehavior of non-participants, spectatoritis, false standards of value among the students, partisanship and depreciation of opponents, the use of the terminology of the battlefield, not of the playground, soldiering of athletes in jobs assigned them. I am sure the list is incomplete, and a formidable list it is. But it is of tremendous importance that we know exactly what we are facing, what our problems are, what we have to overcome.

Exact diagnosis of the ailment is the first step in recovery. We have had before us for not a few years a complete diagnosis of our maladies, and as a result we have been enabled to make considerable progress in restoring to something like good health a most useful and valuable patient. Indeed, Professor Sanford, in 1923, wrote enthusiastically, "We have remedied a hundred evils." All of us can name not a hundred but many evils that are no more. The migratory, the tramp athlete is gone; the ringer is no longer with us; the importation of a whole flock of prize fighters from New York into a football line-up is unthinkable now; athletic participation

START RIGHT

CHOOSE RAWLINGS

THE EQUIPMENT THAT'S BUILT FOR **1935** FOOTBALL

Football systems, speed and plays change ~ so does equipment ~ Rawlings offers for 1935 the most modern, the most up-to-the-minute equipment in the field ~ Designed and built to afford the utmost in protection, safety, and speed plus possessing that inherent quality and ruggedness characteristic of Rawlings ~ It is a quick and sure answer to your "equipment problem" ~ Be sure to see it before you place your orders ~ Better still, give it a trial during spring practice and convince yourself ~ Don't delay, see your Rawlings dealer now!

FEATURING

- FOOTBALLS—Nos. 5RXS and 6-OS. The outstanding Balls in their respective range.
- PANTS—Designed for freedom and ease in action with maximum protection and minimum weight.
- SHOULDER PADS—New models affording real protection with ample freedom for arm and shoulder movements, will not creep.
- HELMETS—New and improved styles that fit and protect. Roomy stream-lined ears.
- JERSEYS—No. J20. The super service heavy duty Jersey that really wears. Also Ra-Tex numbers, long-wearing Jerseys that have the luster and beauty of silk, Ra-Tex retains its sheen. (Pants and stockings also in Ra-Tex to match.)

Drop Us a Line Today

FOR A COPY OF OUR NEW SPRING AND SUMMER CATALOG SHOWING COMPLETE LINES OF EQUIPMENT FOR

BASEBALL—TRACK—FIELD—TENNIS—GOLF—SOFTBALL

RAWLINGS MANUFACTURING CO.,
ST. LOUIS, MO.
SAN FRANCISCO, CALIF.

for four, five, six or seven years is outlawed; hooliganism and muckerism are promptly frowned upon; ruffianism is at a minimum; and good sportsmanship is in the ascendancy.

To be sure, there are sporadic outbursts of unsportsmanlike behavior, and perhaps we shall never be spared occasional outbreaks of vicious conduct. But every evil is a challenge to our best corrective measures, and every exhibition of poor form is an invitation to press with greater ardor our campaign for the finest ideals of sportsmanlike play.

I, for one, propose to continue my interest in, and my support of, intercollegiate athletics, because, knowing the evils, we are in a position to apply the remedy, and, applying the remedy, we have good reason to believe that progress will continue and that in the not too far distant future we may expect to see in our colleges generally the fair and wholesome athletic conditions that even now are to be found in a number, not inconsiderable, of colleges that have been given a clean bill of health. And I venture to quote to you,

"Say not the struggle nought availeth,
The labor and the wounds are vain,
The enemy faints not, nor faileth,
And as things have been they remain."

Let us not say that!

Coming now to closer grips with my subject, I find an excellent outline for the balance of my paper in these splendid words from the pen of Dr. D. A. Penick:

"Put above that desire (the desire to win at any cost) the higher ideals of competition for its own sake and for the sake of the highest development of the participants, the whole school and the spectators, and all the evils incident to the one great evil will automatically disappear, and this is the only way."

As we have labored in season and out of season to enforce these higher ideals of competition for its own sake, what have we accomplished of which we can be proud, first, for the participants; second, for the whole school and, may I add, the world at large; and third, for the spectators?

Values for the Participants

FOR the participants in intercollegiate athletics, what are the values for education and for the formation of genuinely fine character? I take it that there is little or no question about such sports as basketball, baseball, track, wrestling, tennis, gymnastics, golf, swimming. It is very gratifying that these sports have come in for comparatively little criticism. Tennis, how admirable it is! Golf, how excellent! Baseball, what fine play it affords! Track, what a gala event is a conference track meet! Football, there's the rub!

Well, football! "Where will you get, gentlemen, laboratory training to teach a boy a code of honor and chivalry, such as the sport of football can give?" This is the way Dr. Charles Kennedy of the Princeton Board of Athletic Control puts the question. He goes on to say:

"Now when this boy comes to us our great task is to inform and discipline his mental powers, that he may possess a sharp-edged and tempered weapon wherewith to confront life. But we must also teach him a code of honor and chivalry that will govern his use of that weapon. And the great service of college sport is that it can be made to do much for the boy in teaching him that code. The great value of sport is sportsmanship. If we haven't that in college sports, then, gentlemen, we haven't anything. It says to the boy: 'You are going to find, in this world, that there are causes that will mobilize and drain out of you the last ounce of your endeavor, of your initiative, of your devotion. These causes must be met and won, if they are won at all, without crossing the line that represents the sacrifice of integrity and chivalry, of sportsmanship or honesty. You must learn to fight with the best that you can give, and yet never do the thing that would enable you to win if it violates the code.' . . . That is what the world needs. That is what business demands; that is what the professions demand; that is what the manhood of this country depends on. And where will you get a laboratory training in that, gentlemen, such as sport can give?"

Does the football field contribute to these very fine ideals? What about the ethics of the football field? What about the management and control of football games by referees and umpires? Hear what Knute Rockne said in *Liberty*, January, 1925:

"If the ethics of the football field could be extended to politics and to business, the world would take a great step forward."

Hear! Hear! I agree most heartily.

What about officials? Hear Major John L. Griffith:

"Athletes learn to play the game according to rules. Democracy is a glorified athletic game, with good rules, honest officials and players who want to play according to the rules. Too often in government we pick our officials by the spoils system. We should have done a lot better had we picked our bank executives and our public officers with the care that referees are picked for sports."

What excellent officials we have in the Southwest! Of course, these gentlemen are always wrong, even when they are right. Seriously, our officials are splendid gentlemen, sportsmen capable and high-minded, doing much to make the football field the excellent laboratory for character-formation it has come to be. What is the result? Come to instances! Coach Lou Little of Columbia does that very thing in *Collier's* for November 3, 1934. He names approvingly Barry Wood of Harvard; Bob Michelet of Dartmouth; Nathan Parker of Dartmouth, Rhodes Scholar at Oxford; George Pfann, Cornell's All-American quarterback, also of Oxford, now one of New York's most brilliant young lawyers; Frank Nobiletti of Columbia, now establishing unusual records in medical school; Kenneth Fields of West Point, No. 1 in his class and Cadet Commander. So much for Lou Little.

Speaking for myself, I can name an even hundred graduate athletes to whose records I can point with pride and of whose accomplishments I am proud. Were it discreet, I could name certain athletes still with us of whom I am inordinately proud, whom any mother would be happy to have as sons. Each of you can do the same thing.

Put all these testimonies together and you have a most impressive tribute to young athletic manhood and to football, which has made its contribution to the formation of such estimable men. Let us tell each other stories of the football field, stories that will make us swell with joyful pride. Let Lou Little tell his story first. He is speaking of the Rose Bowl game of last year between Stanford and Columbia. He is speaking of sportsmanship, ". . . the type of sportsmanship, for instance, which prompted Captain Bill Corbus of Stanford to come up to Columbia's Cliff Montgomery five or six times during that Rose Bowl game and inquire, 'Monty, is everything going all right and are you getting a fair shake from our team? Let me know if anything goes wrong.'"

Let this story of Knute Rockne's be told next:

"MacCarthy was a little, humble substitute on the Notre Dame football eleven, and on one of the rainy days of that particular season, Knute sprinkled a lot of resin over the floor and said to the team, 'Boys, rub your hands in the resin; get it thoroughly in, so that you will hold on to the ball.' While they were doing that, this little MacCarthy came and sat down on the resin and began pulling himself across the floor, and Knute asked: 'What are you doing that for?' MacCarthy answered, 'To keep from slipping off the bench.'"

I love that story. Such eagerness to get into the game! Such willingness to play a part in the struggle! To be sure, psychology has something to say about the "transfer of learning." We are told that there is transfer from one situation to another only when they have elements in common. Do not the game of football and the game of life have enough in common to warrant the fond belief that little MacCarthy of Notre Dame, wherever he is at this time, is not just sitting on the bench?

Let me tell a story. The Texas Christian University-Santa Clara game (De-

ATHLETIC HEADQUARTERS IN CHICAGO

Occupying practically an entire square block, rising 25 stories high, and providing 1700 guest rooms, Hotel Sherman is the most accessible and conveniently located hotel in Chicago.

1700 ROOMS
1700 BATHS
from **$2.50**

- **Ideal headquarters for your teams, whenever they come to Chicago.**
- **Exceptionally comfortable beds with extra long sizes specially for big men.**
- **Special "training menus" gladly arranged.**
- **Convenient to all transportation and places of amusement.**
- **Home of the College Inn, featuring, always, a nationally famous orchestra.**

CLARK » LAKE » RANDOLPH AND LA SALLE STREETS

C·H·I·C·A·G·O

cember 8, 1934) was a contest skilfully and chivalrously waged, splendidly won and superbly lost. It was exactly what a football game ought to be, free from all objectionable features and rich in generous and heart-warming particulars. The losers were magnificent in defeat—sportsmen all and gentlemen. The winners played the game with not a single penalty called against them. Not a single complaint was registered. It was football at its best.

Now you tell one—a story from the football field to warm the cockles of our hearts. Each one of you has a corking good story to tell. Put all these glorious stories together and you have a volume of substantial praise and endorsement for a game that can call forth such golden deeds. "My idea of sportsmanship," said President Hopkins, "is a very exalted one. It means to me not only playing the game fairly and generously, but it also means playing the game for its own sake and not with any thought of reward. The great value of the idea is that it can be applied to the whole of life. The true sportsman is the man who plays the game of life in a spirit of magnanimity, who scorns to take advantage of a technicality, who uses his superior strength to help and not to oppress, whose mind is set less upon success than upon honor, and whose measure of success is the value of the contribution he can make to life rather than the rewards that he may win for himself."

(To be continued)

Further Development of the Paraffin Treatment for "Shin Splints" and Sprains

By J. Towner Smith
Track Coach, Western Michigan College

WHILE a student at Western Michigan College in 1922, 1923 and 1924, Towner Smith competed on the track team and in 1923 placed second in the National Intercollegiate Meet in the 440 event. He saw action in most of the important relay carnivals of the country. After graduation, he coached track for three years at Miami Senior High School, Miami, Florida, where he turned out two state championship teams. Returning in 1928 to Western Michigan, he took over the track coaching duties. Men developed by Towner Smith hold the Michigan State Intercollegiate Conference records in all of the middle distance runs. The Conference high jump has been won by a Western Michigan athlete each of the past seven years. In the May, 1934, issue of this publication, Smith reported his preliminary experiment with the paraffin treatment for "shin sprints." In this article, he explains the further use of this treatment, notably, that for sprains.

J. Towner Smith

AFTER an indoor dual track meet a few years ago, the author and the coach of the opposing team, from an Ohio college, discussed various and sundry methods of treating "shin splints." This was a very timely subject, for we both had indoor balcony running tracks in our gymnasiums, and any athlete who attempted to sprint the curves before his legs were in shape was sure to be on the "shin splint" roster. The coach of the Ohio team had tried melting a small quantity of paraffin for the immersion of the affected limb and was very strong in his praise of this method of treatment.

In the April, 1933, issue of THE ATHLETIC JOURNAL, Doctors G. G. Deaver and J. S. Coulter state the causes, symptoms and treatment of "shin splints." The treatments prescribed are rest, heat, massage and strapping. Of these four methods of treatment, I believe that the heat treatment is far better than any of the others except rest, and rest will not allow proper conditioning during early season.

It had been customary in our training room to treat "shin splints" with hot applications and the lamp. However, I decided to try the paraffin treatment, for it seemed to offer greater possibilities.

I obtained a five-gallon oil drum, had the top cut out and set the drum on a small electric heater. One hundred pounds of commercial paraffin were purchased from a local oil company for $4.65, of which about thirty-five pounds were placed in the container. Paraffin has a melting point of 130 to 135 degrees F. Five or six hours were required to get it melted the first day, but because it did not solidify entirely over night only two hours were required to melt it the next day. As soon as the paraffin was melted, the heating element was turned off so that the heat would not be too great. When I first dipped my foot in the container, because of the heat I withdrew it immediately, but the paraffin coating left on congealed at once. I was able to replace my foot and leg, and found that the heat was not too intense. After a few minutes, the limb was removed from the tank, and the paraffin was easily stripped off. Beads of perspiration stood out on the part that had been coated with paraffin, and the skin had a ruddy glow. This proved to me that the heat was a moist, penetrating heat that increased circulation and would be valuable for ankle sprains and other injuries.

The boys soon lined up, waiting their turn. Each treatment lasted about ten minutes.

After this experience, at the first sign of a case of "shin splints," the boy would start a series of treatments that lasted till all danger was past, usually about a week. It has been found that the treatment can be given for fifteen to twenty minutes, or longer, without discomfort or ill effects.

The services of a quarter miler had been lost the previous year because of a severe case of "shin splints," and the symptoms were returning when the paraffin treatment was started. The results were so satisfactory that the athlete did not miss a practice session, and he ran in all of the meets. The treatments were continued for the entire indoor season to prevent a recurrence.

In another case, a sprinter developed a severe case of "shin splints" and it was necessary to discontinue strenuous work for a week. He reported in a suit each night, took exercises and the treatment, and, in a week, he was back with the sprinters, working as hard as ever. The treatment was not discontinued immediately.

Since installing the paraffin tank in our training quarters, we have not had a major case of "shin splints," and not one

athlete has been incapacitated because of this particular injury.

Athletes in sports other than track, realizing the value to be obtained from this method, were soon discarding other treatments in favor of the paraffin.

It was found to be very beneficial in the cases of sprains. Usually cold packs were applied to reduce the swelling, after which the injured part was placed in the paraffin tank. All athletes were high in their praise of the quick results obtained.

A year ago, we felt the necessity of enlarging the heating element and the tank. A few heating elements from an old trolley car were obtained (these are practically indestructible). A base was constructed out of strap iron into which the elements were fastened and connected with the power line. This base measured approximately 20 inches wide by 36 inches long by 6 inches high. Two round welded tanks, 18 inches in diameter and 20 inches deep, were obtained, filled with paraffin and put into use. It is desirable but not necessary to have a thermostat to control the heat. A fibre board, placed in the bottom of the tank and used as a foot rest to prevent contact with the bottom, is also worth while.

A Study of Basketball Scoring

By H. D. Edgren
George Williams College

GREAT applause when a basket is made! A few groans if it is missed. But few people ask how many baskets a player should make during a game.

For the past three years I have attempted to score all the attempts made by our own varsity basketball players, as well as by our opponents. This has been done by the use of a spot chart. Each shot is located on the floor by the use of a dot. If the basket is made, the spot is circled.

This method has enabled us to determine the number of shots attempted and made, and also the position on the court of each player attempting a shot.

From this study we have the following results:

Total for all games (George Williams and Opponents): 3902 shots attempted; 960 shots made. 24.6 per cent of shots made.

Total for George Williams: 1809 shots attempted; 458 shots made. 25.2 per cent of shots made.

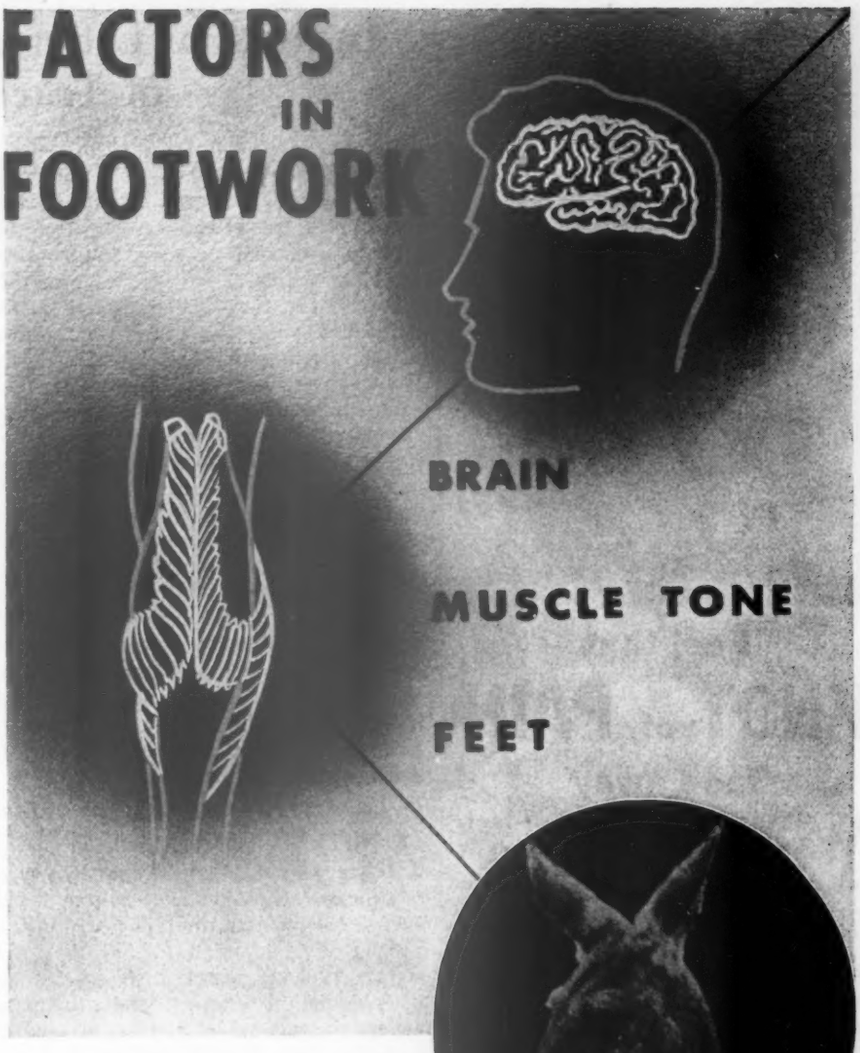
Total for Opponents: 2093 shots attempted; 502 shots made. 23.9 per cent of shots made.

Average per cent of shots made when winning, 29.1 per cent.

Average per cent of shots made when losing, 21.3 per cent.

Range when losing, 38 per cent to 10 per cent; median, 22.2 per cent.

Range when winning, 44 per cent to 14.5 per cent; median, 27 per cent.



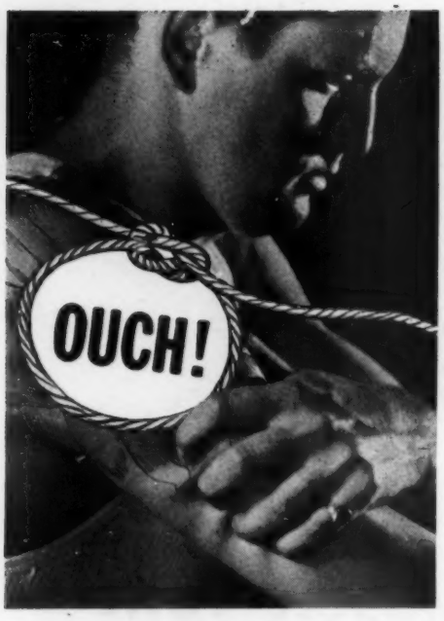
Perfect footwork . . . that puts an extra zip into a forehand stroke at tennis, that enables the star halfback to elude tacklers in the open field, that makes a two bagger out of a one base hit, or that takes the javelin down the field an extra fifteen feet . . . *that* kind of footwork requires a perfect organic balance.

The brain must be quick thinking, and clear . . . the muscles healthy and reactive, and the feet free to obey the neural message and the muscle response.

Genuine Kangaroo, 17% stronger, weight for weight than any other leather, yet soft and pliable as fine kid, makes lighter shoes possible; means Speed, lightweight for Subtle Feints, means feet that come off the field or the track as comfortable and as happy as when they went on.

Put *your* athletes into the pink of condition, mentally and physically—and then shoe them in footwear of genuine Kangaroo to bring out the best they have. No coach could ask for a better prescription for winning teams!

AUSTRALIAN KANGAROO
TANNED IN AMERICA



Feel that

KNOT of PAIN

fade away

WHAT a difference you feel, almost the instant you start to rub aching, throbbing spots of pain with good old Absorbine Jr.

It seems to spread a soothing, warming glow right down to the deepest point of the congestion—muscles tight with pain begin to relax. And then, as your hand moves back and forth over that sore spot, you feel a warm comforting glow, quickly followed by soothing coolness as the knot of pain eases away.

For forty years, the most famous coaches, trainers and athletes have used Absorbine Jr. and praised it—for bruises, strains, sprains and aching muscles. You certainly ought to keep a bottle in *your* home. It saves a lot of suffering—and it's also a fine antiseptic for cuts and burns.

You can get Absorbine Jr. at all druggists, $1.25 a bottle. It is economical to use—only a few drops are necessary per application. For free sample, write today to

W. F. Young, Inc.
Springfield, Massachusetts

ABSORBINE JR.

Relieves sore muscles, muscular aches, bruises, sprains, sleeplessness

Individual Differences in the Training of Track Athletes

(Continued from page 10)

tirely different from the usual. Cunningham is a stocky, powerful man, and Eastman a tall, rangy athlete who has the speed of a sprinter. No doubt his coaches have found that it is best to utilize this unusual speed early in the race. I should guess that he has pronounced recuperation in the race, known as second wind, while Cunningham never experiences this so-called phenomenon, but gradually gains strength as the race progresses.

The study of the training methods of our champions in every event furnishes ample proof that some athletes do better on a maximum amount of work in training and others equally well on little work. Paavo Nurmi was a glutton for work, and many times during the indoor season would work hard in the afternoon before a race at night. Joie Ray was a law unto himself in that his training was very unorthodox and irregular. Yet he ran in championship form for years over every distance up to and including the marathon.

Individual Style

ANOTHER important point in coaching track athletes is to study the type or style of each individual. In practically every event, we find each candidate with a peculiar style of his own. We mean by style or type his natural or easiest method of execution. I believe it wrong to try to change this natural style unless it is so unorthodox that it is impossible to bring about improvement through it. Allowance must be made in the kind and amount of training for the several types.

We find this, for example, in sprinters and jumpers. We seldom see two sprinters who look exactly the same while running. I never have seen two jumpers with identically the same execution. In the Olympic Games in Los Angeles, the winners in the sprints were distinctly different types of men, each with a style in harmony with his type. Tolan, a short, stockily built man, is what is known as a high or floating type. Simpson, a tall, rangy man, is a low or digging type. Metcalfe, a large, powerful man, is an in-between type, or a combination of the high and low, of the digging and floating style. It would be the height of folly to teach these champions to run alike or give them the same schedule or training exercises.

In watching the best high jumpers, we see everything from a jack-knife to a one-and-a-half Gaynor. Some jumpers use a long, fast run, and others a short, slow approach to the bar. The boy should be allowed to jump his natural way, and the best form or style will be the one that enables him to clear the bar at the greatest height.

Several years ago, a group of friends in a hotel lobby asked Honus Wagner to tell them the secret of his batting prowess. He gathered them closely about him and looked carefully around to see that no other ball players were within hearing distance. Then he said, "The secret of batting success in baseball is to 'Hit the ball.'" We remember also what Nurmi said when asked to make a talk on how to run. He said the way to learn how to run is to get out and run, and his speech was finished.

Track is an interesting and fascinating form of athletics to teach because the coach has to deal with so many different types from a mental and physical standpoint. While it is necessary to prescribe a varied program of training and instruction for each individual, the coach should not attempt to change the athlete's natural style or method of execution.

Form in Speed Swimming

(Continued from page 17)

to the wall, or the feet will not get the proper drive. This drive is outward. It is followed by a slight kick, with arms out until ready to resume the stroke. It is often hard to do this under-water turn in the longer races, but it will be found preferable even in these because of the time saving and powerful drive. If necessary, a breath may well be taken just before the turn or just after it. In a long race, the drive and coast should be prolonged. In the shorter sprints, the turn is made quickly, and the resumption of stroke starts after a short glide.

In the breast stroke, the turn must be made with two hands on the end of the pool. If there is a gutter, this may be grabbed. A pull up and swing places the feet in position for the drive. This swing may be made to the side favored by the individual. Some swimmers prefer the over-arm grab to the above-mentioned method of pull before the swing. Both of these methods may be used in gutter-end pools to good advantage. In the case of the flat-end pool, the situation is quite different. The best method has been found to be a quick, two-handed touch—to fulfill the rules—followed almost simultaneously by a twist to the favored side which places the legs in position for the glide on the turn. This turning glide is held much longer in the greater distances than in the shorter sprints. It is likewise deeper in the former than in the latter, and often a few strokes under the water

are added on completion of the glide from the turn. It should always be remembered that the rules are very emphatic in calling for the two-handed turn.

The turn in the dorsal stroke is quite difficult to master. The rule, which at present calls for the competitor to touch the end of the pool before turning over on his side, makes it rather awkward. I understand that in the near future this rule may be changed to allow the competitor to come in reaching for the turn when he is on his side. It will be within the rules, apparently, for the swimmer to turn slightly but not completely over on his face before touching the end of the pool.

Before a race in a strange pool, it is sometimes found helpful for the swimmer to note a point on the ceiling, or on the side of the pool, that may be used in the timing of the turn. When the hand raised in stroke feels the end for turning, it holds its position above the head, while the opposite arm is swung around and brought into position next to the first. This motion brings the body around, while at the same time the feet are placed in position for the push-off. In the gutter-end type of pool, it is often found easier to grab the gutter, as doing this gives a better controlled pull-in with the arms and push-off with the legs. Two types of push after the swing may be used. On completion of the swing, the swimmer pushes off under the water with his arms placed together above his head where, after kicking on to the surface, he resumes the stroke. This may be done with very good results only in pools with a gutter-end. The swing on the back stroke turn must be done with speed—the push more slowly. It should be remembered that if the swimmer is to complete a good turn, his feet must be in the proper position to push off in the right direction.

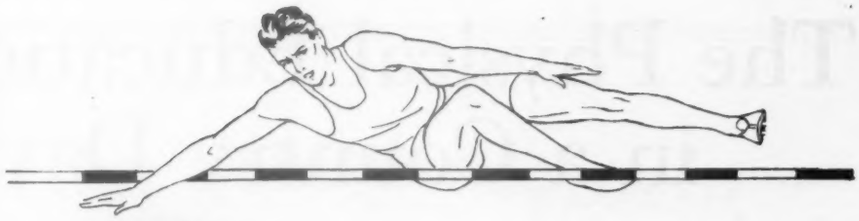
It is best in any kind of turn to practice that which can be used in any type pool—the flat-end turns are of that nature.

An individual cannot possibly learn to swim and turn properly by simply reading accounts of the various strokes and turns. It is necessary for him to spend much time in the water in order to acquire the form that in due time brings the satisfaction and joy that comes with a good performance.

Outstanding Football Plays from Outstanding Coaches

(Continued from page 20)

the team using it. Back 1 took the ball from center and spun; he faded and then passed across the line to the left end. The left end then lateralëd the ball to 3, who had gone through the line. Sometimes, on this play, the left end himself carried the ball. Back 4 blocked to the left and 2 block to the right.



Movie-Trained Athletes

Crossed Bar Five Inches Higher

Put Filmo Equipment on Your Coaching Staff

Two groups of Los Angeles school boys, thirteen in each, were given precisely the same kind of training in the high jump, except that one group received the benefit of movies showing good form in the jump and movies of *themselves* at practice. After several months, the movie-trained group averaged approximately five inches higher at the cross bar than the boys who had not had the movie training.

Filmo 16 mm. Movie Cameras and Projectors have been used by major American school systems for years. Meeting every need as to quality of performance, simplicity of operation, dependability, and longevity, Filmos have remained in the forefront since the start of visual education. Contributing to this success is more than a quarter century of Bell & Howell service to the professional motion picture industry.

Spring is not far away. Now is the time to consider Filmo movies for athletic training, beginning with track and baseball, carrying through the fall with football, and into the winter with basketball and aquatic sports. The Los Angeles test is only a suggestion of what Filmo equipment can do in your school. Write for complete information on Filmo 16 mm. Movie Cameras and Projectors for athletic training.

The Filmo 70-D Camera for Coaching

The Filmo 70-D 16 mm. movie camera is finest for athletic training. Hand-held, easily operated by anyone, it takes movies at seven different speeds, ranging from ½ to 4 times normal speed. The latter speed produces s-l-o-w motion movies, ideal for studying form. Intermediate speeds are usually used for football play-analysis. A turret head mounts three lenses, any one of which is instantly available. With a telephoto lens, distant action is brought up close. Producing the most accurate and dependable movies, your Filmo will soon prove itself a priceless coaching aid.

Bell & Howell FILMO

By the makers, for 28 years, of the standard professional cameras used in studios the world over.

Bell & Howell Company, 1809 Larchmont Avenue, Chicago, Ill. New York, Hollywood, London (B&H Co., Ltd.)

GEORGE LOTT, Jr. USES JUNEMAN'S TESTED GUT STRINGS EXCLUSIVELY !

The JUNEMAN label on your restrung tennis racket is proof of genuine JUNEMAN Tennis Gut.

Write today for free booklet, "Tennis Hints," written by C. W. Gelwick, well known tennis coach.

RANKING players in all parts of the world know JUNEMAN quality and depend upon it to win in close matches. Has drive and power to withstand the rigors of the hardest play—*tough as a grizzly, nimble as an antelope.*

The E. P. JUNEMAN CORPORATION
1100 West 47th Place, Dept. A.J., CHICAGO, ILL.

The Physical Education Program in a Country Day School

By R. P. Hughes
The Saint Louis Country Day School

IN this article, R. P. Hughes describes a highly organized physical education program in which both interschool and intraschool activities have important parts. Mr. Hughes is physical director and football coach at the Saint Louis Country Day School, one of Missouri's excellent private schools. He is a graduate of Springfield College with a Master's Degree in Physical Education.

THE Saint Louis Country Day School is a private institution for boys with an enrollment of 235. For purposes of administration and instruction, it is divided into three schools; the Lower School, composed of the fifth, sixth and seventh grades with seventy boys enrolled; the Middle School, composed of the eighth and ninth grades containing sixty-five boys; and the Upper School, composed of the tenth, eleventh and twelfth grades with an enrollment of one hundred boys. The teaching staff is composed of twenty-one men, sixteen of whom spend at least one hour a day four times a week assisting or directing some phase of the physical education program. During the school year the boys participating in interschool athletics have five periods a week for practice and the boys engaged in intraschool athletics have four periods. The fifth period is spent in some one of the following hobbies: Scout work, woodworking, handicrafts, drawing, soap modeling, airplane models, Chemistry Club, Bird Club, French Club, Mathematics Club, exploration trips and the like.

The Fall Terms

SCHOOL opens about the nineteenth of September, and the opening day is a busy one. The members of the teaching staff who are to assist with the physical education program find in their mail box a mimeographed outline of their fall assignment, a key to the locker which contains the equipment for their squad and the combination to a locker for their personal use. On the bulletin board is posted a daily schedule of each squad's assignments for the first term and a list of the names of the boys in the Middle and Upper Schools who are to participate in tennis. The boys on this list belong to one of three groups as follows:

1. Members and substitutes of the tennis team from the previous spring.
2. Those boys recommended by the tennis coach because of fundamental skill or ability shown in the tennis tournaments of the previous year.
3. Those boys whose physical condition does not warrant their participation in football.

These boys, usually about thirty-six in number, are assigned lockers at noon hour. They report to the two men in charge of tennis at the regular athletic period of the Middle and Upper Schools, which is from 3:15 to 4:35.

The bulletin board also bears a list of twenty-five names of the boys assigned to A or varsity football, made up of returning lettermen, substitutes and boys who have been recommended on their permanent record card for A football. They are called out of class during the morning in groups of five and given their medical and physical examination, and a complete record is made on their permanent record cards. At the same time, they are given their locker assignment so that they will be ready for practice at 3:15. This team plays a schedule of seven or eight games, and letters are awarded on the recommendation of the coach. Each boy winning his letter earns three points toward his camp score in the Red and White competition.

At 2:15, the boys in the Lower School report in their locker room for locker assignments. If they have not provided themselves with football uniforms, as directed by letter during the summer, they now place their orders with a sporting goods salesman who is present. The boys then report to the athletic field and the four men who are to be in charge of their activity. They are divided into first and second squads according to size and ability, in so far as we have any information. The second squad, which consists of twenty-eight boys, begins a ten day period of drill on the fundamental skills of football, using a small size football of the same quality as the regulation ball. At the end of the first ten days they are divided into two teams and, using the same formation as the A team, they spend part of each day in practicing and part in playing a game. At the end of the season the new boys are assigned in equal number to the Red Camp or White Camp for the rest of their school life at Country Day. They play a series of five games, winning points toward the Red and White Cup. The forty-two boys of the first squad follow the same general procedure as those of the second squad, but they are divided into three teams for competition during the season, and into two teams at the end of the season for Red and White competition.

At 3:15 on the afternoon of the first day, the boys in the Middle and Upper Schools who have not been assigned to tennis or to A football report at the gymnasium, where one man assigns lockers, one man supervises the ordering of replacements for their uniforms, two men take their height, two men weigh them, and one man checks their date of birth and semester in school and tabulates all this information for the entire group on one form prepared in advance. With this information and the ratings in football ability from the previous season as indicated on the permanent record cards the physical director spends that evening assigning the boys to football as follows: Twenty-five boys are assigned to the B football team according to the California Exponent System; twenty-five are assigned to the C team by the same system. These two groups practice on the same field but under separate coaches, using the same general system of play as the A team. Each group plays six games during the season with teams from three other private schools using the same system of classification. Letters are awarded to boys on B and C teams on the recommendation of the coach if the team has won half the number of games played. At the end of the season, these teams play for points toward the Red and White Cup. The boys' medical and physical examination is given during the second day of school and they are ready for practice that afternoon.

The remaining boys are assigned to the Middle School League under the direction of four teachers, where they receive coaching in fundamentals for a ten day period. Then they are divided as equally as possible according to ability into three teams. Each team has its own coach, and the fourth man assigned to this activity is the referee. The teams play a regular schedule of games throughout the season, with alternate teams practicing each day. They also participate in Red and White competition at the end of the season. Medical and physical examinations are given to the boys as soon as possible. In all of the intraschool programs, each boy must play at least half of each game.

Each boy's parents are notified of the result of the medical and physical examination, and, where postural defects exist,

they are informed that the boy will be placed in remedial classes during the winter and spring terms. The parents are requested to confer with the director if they so desire and to furnish information on anything in the physical history of the child which should be considered when making athletic assignments.

At the end of the term, a written report for each boy is sent home. This shows loss or gain in weight, gain in height, activity participated in and rating as to the individual's ability and progress, together with any comments thought necessary.

Winter and Spring Terms

TWO weeks before the end of the first term, a class list of the boys in the Middle and Upper Schools is posted on which each boy has the opportunity of indicating his first and second choices of winter activities from the following list:

A, B or C basketball, five days a week; A or B soccer, five days a week; fencing, four days a week; wrestling, two, four or five days a week; boxing, three days a week; rifle club, two days a week; winter track, two days a week; Middle School League basketball, two days a week; Middle School League soccer, two days a week.

The boys are assigned according to their ability rating and the California Exponent System as explained under "The Fall Term."

The boys in the fifth grade play soccer twice a week, gymnasium games once a week and captain ball, or other games which tend to develop basketball skills, on the fourth day. Basketball is played occasionally with baskets one foot lower than regulation height. A league is formed of the boys in the sixth and seventh grades, and both soccer and basketball are played. The same general organization and coaching scheme is followed as explained regarding football.

In addition to their regular physical activity period, boys in need of remedial exercises meet for two forty-minute periods weekly in small groups. Boys in need of exercises for flat feet meet fifteen minutes daily.

The same general scheme is followed throughout the spring term in the following sports: A or B baseball, five days a week; A or B tennis, five days a week; A track, four days a week; Middle School baseball, four days a week; Middle School tennis tournament; Lower School baseball, four days a week; Lower School tennis tournament.

Red and White Organization

THE boys earn points as follows in the Red and White Camps:

FOOTBALL—166 points

A—Allow 16 letters, 3 points each letter	48
B—Two games, 10 points each game, divided in the same ratio as the score	20

BASEBALL
BASKETBALL
LA CROSSE
FOOTBALL

PROBABLY the commonest of athletic injuries, especially in baseball, basketball, la crosse and football, are bruises and muscle tears. Such injuries, too, may be very incapacitating, especially when they occur, as they most frequently do, in the thigh.

First-aid measures include the application of Antiphlogistine and a pressure bandage. These give good support and the Antiphlogistine, in addition, helps to ease the pain, promote the absorption of the extravasations and favor the healing process.

ANTIPHLOGISTINE

Sample sent free to any coach, trainer or athletic director.

THE
DENVER CHEMICAL MAN'F'G CO.
163 Varick Street
NEW YORK, N. Y.

COACHES and TEACHERS

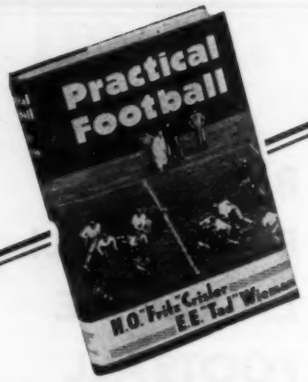
We Place You in the Better Positions—Unexcelled Service

ROCKY MT. TEACHERS AGENCY
410 U.S. NAT. BANK BLDG. DENVER, COLO.

Wm. Ruffer, Ph. D., Mgr.

OUR FIELD---UNITED STATES

We Enroll Only Normal and College Graduates



For Spring Practice and Fall Plans

A sensible and practical manual for coaches, players, and students of the game. **Ideas are presented concisely and briefly and only practical, ready-to-use methods are considered. Special emphasis is given to blocking, tackling, position play, the kicking game, the passing game, the running game, offensive plays, generalship and defensive planning.**

PRACTICAL FOOTBALL

By H. O. [Fritz] Crisler
Head Football Coach,
Princeton University

and E. E. [Tad] Wieman,
Line Coach, Princeton University

$3.00

Dan E. McGugin says: "It is so sound and comprehensive that a man who masters it might be a good coach without ever having played."

Len Elliot: "The best textbook on the game this writer has read. Besides the detail on technique, which is remarkably lucid, and on strategy, there are two chapters of unusual interest. One is on scouting and the other on injuries."

Ralph Cannon: "The individual and team photo-diagrams are by far the best produced so far and the writing is absolutely clear and to the point."

Lou Little: "Every page is boiled down to actual ready-to-use material. I recommend the book most highly."

D. X. Bible: "The book is an excellent contribution to football and I commend it to all players and coaches."

Send for a copy on approval

McGRAW-HILL BOOK CO., Inc.
330 West 42nd Street
New York, N. Y.

You may send me on approval a copy of Crisler and Wieman's PRACTICAL FOOTBALL ($3.00). I agree to return the book, postpaid, in ten days after receipt or to remit for it at that time, plus the necessary postage.

Signed .....

Address .....

Official Position .....

Name of Institution..... AJ3-1-35

C—Two games, 10 points each game, divided in the same ratio as the score 20
Middle School first team—Three games, 6 points each game..... 18
Middle School second team—Three games, 6 points each game..... 18
Seventh Grade—Five games, 3 points each game 15
Sixth Grade—Five games, 3 points each game 15
Fifth Grade—Four games, 3 points each game 12

BASKETBALL—166 points
A—One game; points divided in the same ratio as the score..... 48
B—Two games; points divided in the same ratio as the score..... 20
C—Two games; points divided in the same ratio as the score..... 20
Middle School first team—Three games, 6 points each game..... 18
Middle School second team—Three games, 6 points each game..... 18
Seventh Grade—Five games, 3 points each game 15
Sixth Grade—Five games, 3 points each game 15
Fifth Grade—Four games, 3 points each game 12

BASEBALL—166 points
A or B—One game, 52 points divided in the same ratio as the score..... 52
Middle School first team—Three games, 12 points each game..... 36
Middle School second team—Three games, 12 points each game..... 36
Seventh Grade—Five games, 3 points each game 15
Sixth Grade—Five games, 3 points each game 15
Fifth Grade—Four games, 3 points each game 12

TRACK—166 points
Indoor Track—11 Events..... 66
Outdoor Track—15 Events..... 90
Two Relays—1 10
Relays count 5 points each. In all other events the awards are 3 for first, 2 for second and 1 for third place.

BOXING AND WRESTLING
Three points each match.

TENNIS—22 points
Upper School Tournament..... 10
Middle School Tournament..... 7
Lower School Tournament..... 5

SOCCER—84 points
A or B soccer—Six games, 5 points each game 30
Middle School first team—Six games, 2 points each game..... 12
Middle School second team—Six games, 2 points each game..... 12
Seventh Grade—Ten games, 1 point each game 10
Sixth Grade—Ten games, 1 point each game 10
Fifth Grade—Ten games, 1 point each game 10

Any boy is eligible to represent his camp in any sport, but he may not play on more than one team in the same sport in the same season.

Athletic Equipment

THE school is generously provided with fields, courts and equipment as follows: Three regulation football fields and one small field; one gymnasium, with one large and two small basketball courts; a playshed containing three small basketball courts; a large outdoor asphalt basketball court; one track (one-fifth of a mile); one wrestling room; one boxing room and ring; one fencing room; one indoor rifle range (accommodates four boys at a time); one combination indoor rifle and pistol range (accommodates one); five baseball diamonds; and nine tennis courts.

Results

SOME results produced by the system are as follows:

Last year we were awarded permanent possession of the A. B. C. League Trophy. The trophy was awarded annually to the school totaling the greatest number of points in all sports in all classes and permanently awarded to the school winning it three times.

This year we are leading by about 850 points in the competition for the first leg on the Harvard Club Trophy, the new trophy to be awarded in A. B. C. League competition.

During the past two seasons, our A football team won thirteen games, lost one and tied two.

In 1932, our A basketball team was runner-up in the Saint Louis District Tournament for B Class schools. In 1933, ours was the only undefeated team in the District and won the Saint Louis District Tournament for B Class schools.

In 1932, our representatives won the doubles championship in the State Tennis Tournament. In 1933, our representative won the singles championship in the State Tennis Tournament.

For Coaches of Girls' Basketball

MEN and women who coach basketball for girls will welcome an outline in mimeograph form prepared by I. W. Hanson, coach of the public schools at Howard Lake, Minnesota.

The outline which is entitled "Practical Girls' Basketball," contains twenty-five diagrams of plays which may be used under the girls' rules. It also takes up the fundamentals that should be known by the players in each position.

The Mechanics of Sprinting

By Greyson Daughtrey
Norfolk Division, College of William and Mary

AFTER participating in the high jump, broad jump, quarter mile and half mile events at the College of William and Mary, Greyson Daughtrey studied under Hoyt of the University of Michigan while a candidate for an advanced degree in physical education. For two years he coached in the Richmond, Virginia, public school system. At the present time, he is Coach of Track of the Norfolk Division of the College of William and Mary, as well as Athletic Director at Blair Junior High School of Norfolk, Virginia.

SINCE the beginning of time, man has been running. We hearken back to the days of Roman and Grecian omnipotence when running was one of the greatest sports in existence. Grecian foot races were the predominating events in the ancient Olympic Games. Warring nations threw down their weapons and for days they celebrated within the walls of the Olympic Stadium.

Only in the last seventy-five years has running become an art among moderns. Men all over the world are now studying the technique of sprinting. Many articles have been written describing the various sprinting styles, and much discussion is the outcome.

Sprinting may be divided into three parts: the start, the stride, the finish. The most technical and the most complicated of the three is the start. Every coach likes a runner who can come off his mark fast. In fact, most coaches spend a great deal of time drilling candidates on the technique of the crouch start.

The Crouch Start

RUNNING should be viewed from a technical standpoint. People run and walk, and never know the mechanics involved. Running, as well as walking, consists of a series of falls. The force of gravity tends to cause the body to fall forward; then the foot is extended, which stops the fall. This process continues at whatever rate the individual wishes. If slowly, the individual walks; if with speed, the individual runs.

When a race is begun, the contestants start from a stationary position. The aim is to get under way as quickly as possible. Going back to the mechanics of walking and running, we should say the faster the individual can fall, the faster he has to catch himself, resulting in a faster start.

At this point the question of the initial step is raised. Some coaches advocate the full stride for the initial step, while other coaches stress the importance of the abbreviated first step. Again we may refer to the mechanics of running. The idea is for the runner to fall as fast as possible, as he leaves the mark. This can be done only if he keeps the upper part of his body inclined well over the center of gravity, which is located in the region of the second sacral vertebra. If the long first step is taken, the forward lean of the body is checked because of the fact that the leading leg is placed too far in front of the center of gravity, thus causing the body to become balanced. An unbalanced start is what we want, even to the degree in which the individual is nearly stumbling. An individual who takes a long initial step will lead for the first two strides, but he will be behind a runner who takes the short steps, when the ten-yard mark is reached. Of course, this is assuming that each runner has, in other respects, the same starting speed.

We may compare a runner with an automobile. A car should never be started in high gear. The proper sequence of gears is followed in their correct order from first to high. To start a car in high would put too much strain on the parts involved and also result in a loss of pick-up speed. For a runner to start off in high gear (sprinting stride) would mean sacrificing the progressive speed which could be obtained from the first two gears (short steps with a gradual merging into the sprinting stride).

Working on this basis of the crouch start, with the initial steps very much abbreviated, we are faced with various schemes of teaching the proper form. Many coaches advocate the crouch start with the short step, but they do not give us any scientific means of stressing this style of starting.

Until the point of actually taking the first step is reached, we may say that the form is practically mastered. Science and experience have proved that the crouch start is the fastest means of getting under way from a stationary position. The runner digs the hole for his first foot, which is usually the left, approximately six inches behind the starting line. Putting his front foot in this hole, he lowers himself with the knee of the other leg close to the instep of the front foot. Where the rear foot touches the ground is the point for the digging of the hole for this foot.

The hands are placed shoulder width apart, with arms straight. The fingers should be in a tripod position, index finger on the starting line, thumbs to the rear and facing each other. The body should be inclined forward. Thus we have the runner in his "on the mark" position. To "get set" he rises until his back is straight. He inclines his body well over the line and distributes his weight on his hands and front foot.

When the signal for starting is given,

Attend the UNIVERSITY of DENVER
Summer
COACHING SCHOOL
In Cool, Mile-high Denver
JUNE 17 to 29

•

FOOTBALL
THOMAS, Alabama
BIBLE, Nebraska
LINDSAY, Kansas
HUGHES, Colo. State
LOCEY, Denver
Other specialty men

•

RULES & OFFICIATING
MAHONY, Denver

•

BASKETBALL
LAMBERT, Purdue
HUBBARD, Denver

•

TRACK
TEMPLETON, Stanford

•

INTRAMURAL ATHLETICS
COLEMAN, Oregon State

•

GOLF
Group Instruction by local Professionals

•

Combine your Coaching School training with your vacation in the snow-capped Colorado Rockies — America's playground. Mountain Trips, Fishing, Camping, Summer Sports, Horseback Riding and Hiking may be enjoyed along with the advantages of a metropolitan city.

Opportunity to attend the N. E. A. Convention.

TUITION $25.00
For ALL Instruction
Credit may be earned toward degree
FOR PARTICULARS FILL OUT THE COUPON

PERCY P. LOCEY, U. of D. Stadium
Denver, Colorado

NAME.....
ST. AND NO.....
CITY AND STATE.....

RIDDELL

The Trade Mark of

Quality and Service

Riddell Baseball Shoes

After all, the kind of baseball you play depends largely upon your speed. The tempered spike, copper riveted, glove fitting Riddell baseball shoe must be good to reach its present popularity.

A NEW MODEL

Style 41 $3.50

A featherweight shoe of outstanding value.

Style KB $4.25

A blue back kangaroo shoe. The right model for the player who prefers a straight shank shoe.

Style NB $5.00

An extremely popular blue back kangaroo shoe. Flexible shank. Used by many of the leading colleges and professional teams.

Style OB $8.50

A hand turned featherweight blue back kangaroo shoe of the finest quality.

Style SB $10.00

Same as the OB, but made of yellow back kangaroo.

JOHN T. RIDDELL, INC.

1259 N. Wood Street

Chicago, Illinois

the runner takes his initial step, with the rear foot and opposite arm coming to the front together. The other arm goes to the rear. The arms should be bent, with elbows locked and swinging to the same extent as they do when in the actual sprinting stride. The throw of the opposite arm and leg tends to keep the runner in a straight line and to give him a natural start. An individual has to swing his arm with the opposite leg while running. So why not make the start natural?

From this point on, the form is somewhat vague. We know the advantage of having the first step short. We know that one of the arms, with its elbow bent, should drive forward with the opposite foot. The initial steps should be short and the arms drive vigorously at the sides with elbows locked. Starting from here, we shall continue and discuss the runner from the moment he is in low gear through the point at which he merges into high and finishes the race.

A line should be drawn twelve inches from the starting mark. The runner should make his initial step by placing his rear foot exactly on this line. Having made the first step, he should hold this position for a short while, concentrating on the proper form. At this point, the body is crouched and the opposite arm is driven forward as described in preceding paragraphs. The distance from this first-step line to the hole of the rear foot is measured, and this distance should be used to determine the second step. The measurements for the second step should begin with the toe of the front foot. The above distance should be used for measuring, and another line should be drawn at the proper distance from the front foot. This procedure gives us two lines which are points on which the first two steps should be made. Three or four lines should be drawn, each having the same measurements as the others, and these determine the points on which the next steps should be taken.

The runner should practice faithfully coming off the mark, hitting each one of these lines, with arms driving vigorously at the sides. After he has mastered this style of starting, he may consider himself ready to practice the next phase of sprinting, which is the stride.

The Running Stride

THE theory of the crouch start having been mastered and bodily mechanics involved having become more or less reflex action, the sprinter is now ready to merge into his natural sprinting or running stride. Looking at the runner photographically, we see him at the point where he begins to stride. His knees are well up in front and his toes are pointed. His arms are swinging smoothly and vigorously by his side, and his body is beginning to rise in a more nearly upright position as the strides are made longer. It is at this point that we shall study the technique of the stride and endeavor to bring the theory of the sprinting stride within a practical grasp that will enable the sprinter to run faster, more smoothly and with better form.

The study of the fine points of form means more to the sprinter than any other type of runner, with the exception of the hurdler, and the hurdles are basically a sprinting event. In distance running, the participant may have very poor form and still win his race if he has worlds of endurance. However, it is the exception and not the rule that a sprinter wins a race with poor form.

The runner, as he merges into the natural sprinting stride, has to assume a position more nearly erect, because his legs are placed farther out in front, well beyond the center of gravity. This naturally forces the upper part of the body backward. It is at this stage of action that the fine points of running have to be understood. Naturally, the longer the stride, the more upright will be the body angle. If this body angle is maintained, the sprinter will be running up and down, when the object is to go forward. This tendency may be corrected by using the arms vigorously and inclining the body forward. The most difficult part of the race is maintaining this body angle while striding. To maintain the sprinting stride, the runner should keep his knees well up in front and his toes extended nicely. His arms should swing, with elbows locked, in harmony with his legs. His body should be inclined forward, maintaining a straight line from the heel to the back of the head. The runner should endeavor to have a body lean not from the waist but from the back foot to the top of the head.

The Finish

NUMEROUS races are won or lost in the last five yards of a dash. The runner, having forgotten to heed the mechanics of the running stride as he nears the end of the race, finds that he is not getting the same momentum forward that he had at the beginning. His arms are not responding smoothly, and his body is leaning backward instead of forward. The head, which should be held in a straight line with the rest of the body, is thrown too far backward. The runner is beginning to "tie-up." Unless these faults are overcome, he will continue to lose races in close competition.

When finishing the race, the runner should get his knees well up in front, with his toes pointed forward. His arms should be driven very hard and well to the front. As the tape is neared, he should rise a little and concentrate on a burst of speed. With a final drive, he strides through the tape with a great burst of speed, which is the result of excellent co-ordination and forward momentum.

How to put your team in the cheering section

HERE are Spalding's contributions for a great baseball season—contributions designed to raise cheers for you.

The new Resilite bats—harder-hitting . . . lively . . . tough . . . moisture-proof and chip-proof! Others, too, of course.

The new "Dizzy" Dean Glove, designed by the great Cardinal pitcher himself, and made with the full benefit of Spalding's "know how."

Spalding's famous shoes, enhanced by the No. 40, a new "high" in value for limited budgets.

Have your Spalding Store or dealer show you the whole 1935 line. Or write to A. G. Spalding & Bros., 105 Nassau St., New York, N. Y., for the new College and School Catalog.

A. G. Spalding & Bros.

BASEBALL EQUIPMENT

● **OFFICIAL NATIONAL LEAGUE BALL**—with Spalding's patented Cushioned Cork Center and other specifications laid down by *both* major leagues. Used *exclusively* by the National League, which hasn't used anything *but* Spalding Baseballs for more than half a century.

● **"WORLD SERIES" SHOES.** Most popular footgear in the Big Time—and the lightest. Kangaroo leather. Also other Spalding shoes—including the No. 40, an outstanding value in the low-price class.

● **DO YOU KNOW**—that Spalding has consistently outfitted many of the National and American League clubs with their uniforms?

● **HOT NEWS! . . .**
"DIZZY" DEAN GLOVE

Brand new for 1935. Designed by "Dizzy" himself . . . and a gem! Other Spalding gloves for every player, preference and price requirement. Also new for 1935 is a Spalding glove of "Kromax" leather, the feature of which makes a glove easy to break in and "stay put" after it is broken in.

● **NEW "RESILITE" BATS**—the barrels are treated with Resilite, a hardening substance that penetrates completely through the barrel, giving a hard, solid point of percussion *without adding weight.* The grip, or shaft, is untreated, so the bat retains all the natural "whip." In fool-proof tests, *Resilite-treated wood proved twice as lively . . . more than three times as durable . . .* as the same wood untreated. Other Spalding bats from the superb "Old Hickory" down to boys' models.

● **DO YOU KNOW** that Spalding Shoes are worn by more big league baseball players than all other makes combined?

Athletic Journal Picture Service

The picture service inaugurated last year by the Athletic Journal is FREE to subscribers.

Illustrations Now Available

FOOTBALL

Clipping ..... 5 Illustrations
Fair Catch..... 2 Illustrations
Positions on Line of Scrimmage ..... 6 Illustrations
Dead Ball..... 5 Illustrations
Tackling ..... 1 Illustration
Position of Ball.... 2 Illustrations
Tripping ..... 2 Illustrations
Forward Pass.....10 Illustrations
Blocking and Use of Hands..... .....17 Illustrations
Legal and Illegal Blocking..... .....21 Illustrations
Forward Pass Interference..... ..... 8 Illustrations

BASKETBALL

Meeting the Fake Shot and Dribble .....12 Illustrations
Playing the Dribbler..... .....12 Illustrations
The Reverse Pivot..12 Illustrations
The Double Pivot..12 Illustrations
The Front Turn....12 Illustrations
Guarding the Fake and Reverse.. ..... 6 Illustrations
Hand Positions in Passing and Shooting .....17 Illustrations
One-Hand Pivot Shot..... ..... 8 Illustrations
Two-Hand Pivot Shot..... ..... 4 Illustrations
Push Shot .....10 Illustrations
Free Throw .....12 Illustrations

These illustrations, which are reprints from the Athletic Journal, suitable for posting on bulletin boards, are a great aid to coaches. Each subscriber is entitled to one copy of each set of pictures. If you have not already received your copy of any of these pictures, your request should be sent in at once.

THE ATHLETIC JOURNAL
6858 Glenwood Avenue **Chicago, Illinois**

National Association of Basketball Coaches

ANNUAL CONVENTION

CHICAGO, ILLINOIS

April 3-4-5, 1935

Technical discussions by leading coaches.

Panel discussion on standardized interpretation of the basketball rules.

Information and discussion on basketball in the XIth Olympiad.

Demonstration basketball games at Loyola University.

Banquet—Entertainment—Swimming

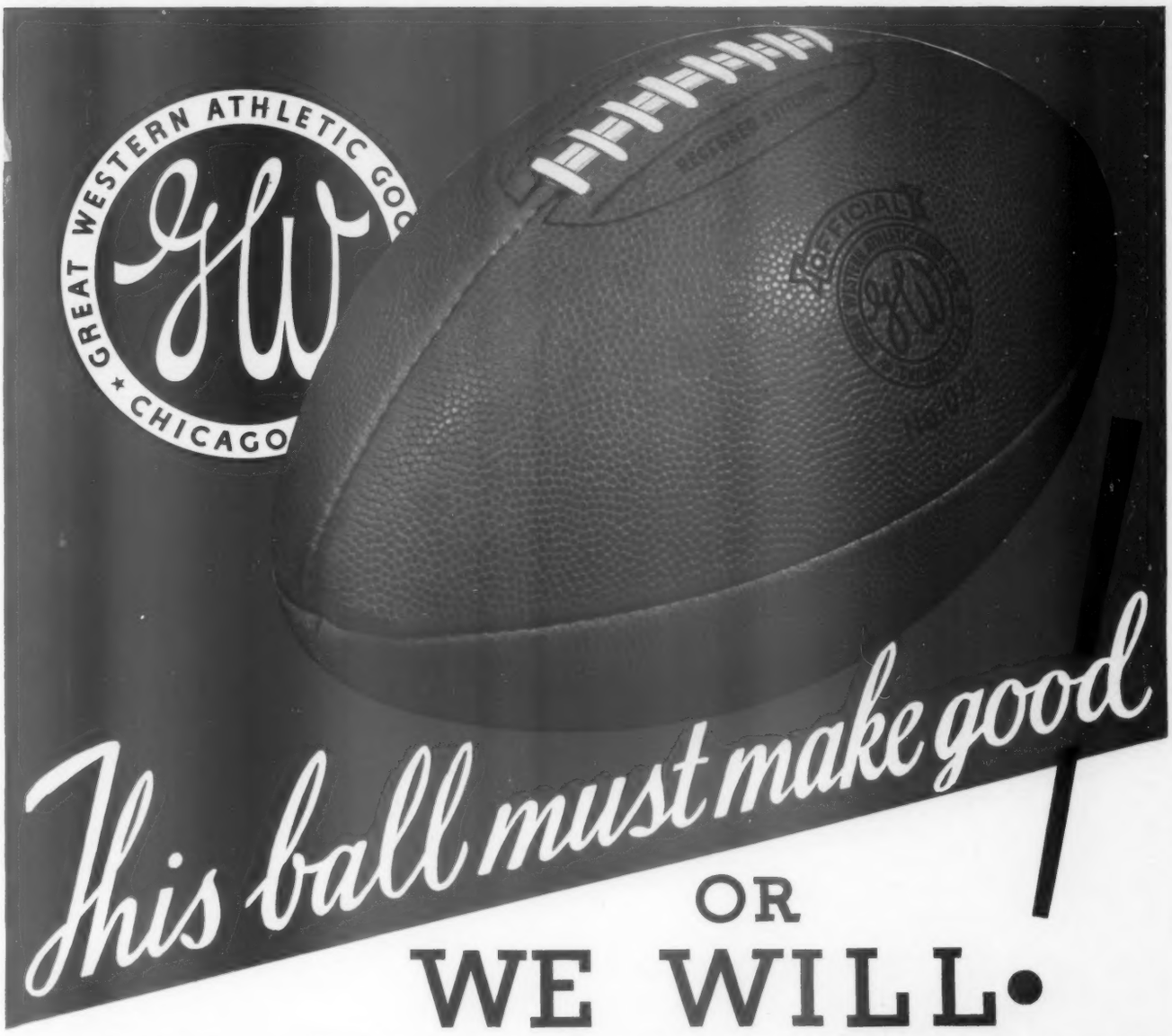
For further information address

GEORGE R. EDWARDS, Secretary-Treasurer
Athletic Department, University of Missouri
COLUMBIA, MISSOURI

For room reservations address the Sovereign Hotel, Convention Headquarters, 6200 North Kenmore Avenue, Chicago.

INDEX TO ADVERTISERS

Absorbine Jr. 36
Bell & Howell Company..... 37
Bike Web Mfg. Co..... 1
Crisler-Wieman Practical Football 40
Denver Chemical Mfg. Co..... 39
Denver Coaching School..... 41
Goldsmith Sons, Inc., The P..... 27
Great Western Athletic Goods Co. .....Inside Back Cover
Hotel Sherman 33
Huntington Laboratories, Inc..... .....Inside Front Cover
Juneman Corp., The E. P..... 37
Kangaroo Leather Association.... 35
Northeastern Coaching School... 29
Northwestern Coaching School... 25
O'Shea Knitting Mills....Back Cover
Rawlings Mfg. Co..... 31
Reach, Wright & Ditson, A. J.... 4
Riddell, Inc., John T..... 42
Rocky Mt. Teachers Agency..... 39
Spalding & Bros., A. G..... 43
Wilson-Western Sporting Goods Co. 22-23
Wisconsin Shoe Co..... 28
Witchell-Sheill Co. 3



The GW 000 DeLuxe Official Football is out to establish a reputation for merit during Spring practice. . . . It is built exactly to official specifications from the ***choicest selection of materials*** —it is double laced, double lined and double stitched — and is built with the exclusive GW Evertru Balance feature, without plug stitching, that insures absolute, perfect balance for increased efficiency in punting and passing. . . . It is as fine a football as can be made, built to deliver perfect performance during the most gruelling play! Try it and test it now, during Spring Practice—if it does not measure up 100% to your expectations, return it to us with your criticism, and we will refund the full purchase price. ***It must make good, or we will***

GW

GREAT WESTERN ATHLETIC GOODS CO.

2601 W. ARTHINGTON ST. CHICAGO, U. S. A.

O'SHEA AWARD SWEATERS

There are O'Shea Honor Sweaters
for all Purposes and Purses

HEAVY SHAKERS

MEDIUM SHAKERS

BABY SHAKERS

JERSEY SWEATERS

All are made of the finest yarns and with the same careful attention to details of manufacture which has always distinguished O'Shea sweaters and which has made them the Standard for fifteen years.

NRA MEMBER U.S.

O'SHEA KNITTING MILLS

Athletic Knitted Wear for Every Sport

2414 N. SACRAMENTO AVE. CHICAGO, ILL.